REQUEST FOR PROPOSAL (RFP)

PUBLIC ADDRESS SYSTEM UPGRADES

FOR

O'HARE INTERNATIONAL AIRPORT

Specification No. 124497

Required for use by:

CITY OF CHICAGO
(Chicago Department of Aviation)

CITY OF CHICAGO
(Department of Procurement Services)
All Responses and other communications must be addressed and returned to:

Jamie L. Rhee, Chief Procurement Officer
Attention: Lisa Freelon-Gilbert, Senior Procurement Specialist
Department of Procurement Services
Bid & Bond Room - Room 301 City Hall
121 North LaSalle Street
Chicago, Illinois 60602

A pre-submittal conference will be held on December 9, 2014, at 10:00 a.m., Central Time, at the O'Hare International Airport – Administration Building, located at 10510 W. Zemke Road, Chicago, Illinois, 60666.

ALL PROPOSALS MUST BE RECEIVED BY 4:00 P.M., CENTRAL TIME ON FEBRUARY 25, 2015

RAHM EMANUEL	**JAMIE L.RHEE**
MAYOR	**CHIEF PROCUREMENT OFFICER**

SUBMITTAL CHECKLIST

Request for Proposal (RFP) for Public Address System Upgrades for O'Hare International Airport

Specification No. 124497

Volume I - Required Content

- ☐ Cover Letter
- ☐ Executive Summary
- ☐ Respondent's Legal Entity Contracting Information
  - ☐ Joint Venture Agreement including Schedule B and Disclosures as
  - ☐ appropriate LLC Operating Agreement and Disclosures as appropriate
  - ☐ Licensing information
- ☐ Project Understanding and Approach
  - ☐ Narrative
  - ☐ Team Organization Chart
- ☐ Respondent's Professional Qualifications and Specialized Experience
  - ☐ Narrative
  - ☐ Project Reference Forms – Exhibit 7
- ☐ Professional Qualifications, Specialized Experience and Local Availability of Key Personnel Committed to this Project
  - ☐ Narrative
  - ☐ Staff Organization
  - ☐ Chart Key Personnel
    Resumes
- ☐ MBE/WBE Participation Plan and Commitment - SUMMARY
  - ☐ Schedule C-1
  - ☐ Schedule D-1
  - ☐ Schedule B and JV agreement if appropriate
- ☐ Schedule of Compensation (Cost Proposal) – Exhibit 2

Volume II - Required Content

- ☐ Conflict of Interests
- ☐ Respondent's Corporate
- ☐ History Legal Actions
- ☐ Financial Statements
- ☐ Economic Disclosure Statement and Affidavit

☐ Insurance

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1. Schedule A
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1. Attachment A: Assist Agencies
2. Attachment B: Sample Letter to Assist Agencies
3. Schedule B: Affidavit of Joint Venture (MBE/WBE)
4. Schedule C-1: MBE/WBE Letter of Intent to Perform as Subcontractor, Supplier, and/or Consultant
5. Schedule D-1: Affidavit of MBE/WBE Goal Implementation Plan
6. MBE/WBE Utilization Report
Exhibit 4 Online Economic Disclosure Statement and Affidavit Certification of Filing
Exhibit 5 Insurance Requirements and Evidence of Insurance
Exhibit 6 Professional Services Contract (SAMPLE)
Exhibit 7 Project Reference Form
Exhibit 8 Chicago Department of Aviation's Construction Safety Manual
Exhibit 9 Project Wise Access Instructions

REQUEST FOR PROPOSAL (RFP) FOR

PUBLIC ADDRESS SYSTEM UPGRADES FOR O'HARE INTERNATIONAL AIRPORT
Specification No. 124497

I. GENERAL INFORMATION

The City of Chicago ("**City**"), acting through its Chicago Department of Aviation ("**Department**"), invites the submission of Qualifications and a Cost Proposal (**"Proposal"**) for Request for Proposal (RFP) for Public Address System Upgrades ("**Services**") to provide the Department with the Services set forth on the attached Exhibit 1 for O'Hare International Airport. The intent of this Request for Proposals ("**RFP**") is to select a most qualified Respondent proposing to provide the Services under the terms that the Department deems to be the most advantageous to the City.

"Respondent(s)" means the entities that submit Proposals in response to this RFP. The Respondent(s) awarded a Contract pursuant to this RFP, if any, are sometimes referred to herein as "**Contractor.**" "**Contract or Agreement**" refers to a Contract awarded to a Contractor.

A. Background

The City of Chicago, through its Chicago Department of Aviation (CDA), is strongly committed to its Public Address System Upgrades for Chicago O'Hare International Airport (O'Hare).

This document outlines the services needed by the CDA to manage all aspects of the Management of the Public Address System Upgrades for O'Hare.

B. Scope of Service

The scope of services requested in this RFP is described more fully in the attached **Exhibit 1**, **Scope of Services.**

C. Term of Services

The City intends to award one (1) Contract pursuant for design, installation, testing and maintenance of the Public Address System to this RFP solicitation for a base contract period of fifteen (15) years. This term includes nine (9) year maintenance of the system after twelve (12) month warranty period.

D. Communications; Pre-Submittal Conference; and Document Availability

1. Communications between the City and Respondents

Respondents must communicate only with the Department of Procurement Services ("**DPS**") regarding this RFP. All questions or requests for clarification must be submitted to the following e-mail address: lfreelon@cityofchicago.org. The subject line of the email must clearly indicate that the contents are "Questions and Requests for Clarification" about the RFP, is "Not a Proposal", and must refer to "Public Address System for O'Hare International Airport, Specification #124497". No telephone calls will be accepted.

All questions and requests for clarification must be submitted no later than 4:00 p.m. Central Time on **December 23, 2014** or no response will be provided except at the discretion of the City. A Respondent that deviates from any of these requirements is subject to immediate disqualification from this RFP process.

2. Pre-Submittal Conference / Site Visit

The City will hold a pre-submittal conference on **December 9, 2014** at the O'Hare

International Airport – Administration Building, Conference Room 1, located at 10510 W. Zemke Road, Chicago, Illinois, 60638 at 10:00 a.m., Central Time. Attendance is not mandatory but is strongly encouraged. The City will address questions regarding the RFP at the pre- submittal conference, and may respond both to questions or requests for clarification raised on the day of the conference, and to questions submitted prior to the conference date. However, Respondent may only rely on written addenda and/or clarifications. The City of Chicago accepts no responsibility for timely delivery of materials, and Respondents are solely responsible for acquiring necessary information, addenda and/or materials.

3. RFP Document Availability, Information Resources

Respondents should obtain this RFP from the Bid & Bond Room located at City Hall, 121 N. LaSalle St., Room 301, Chicago, Illinois 60602.

Respondents may request the Bid & Bond Room personnel mail them a copy of the RFP by providing the Bid & Bond Room a Federal Express account number or make arrangements with Bid & Bond Room personnel to have a package ready for pickup by another courier service. The Bid & Bond Room telephone number is (312) 744-9773. The City accepts no responsibility for the timely delivery of materials.

In the alternative, Respondents may download the RFP from URL address: http://www.cityofchicago.org/content/dam/city/depts/dps/ContractAdministration/Specs/2014/Spec124497.pdf. All Respondents who choose to download the RFP are responsible for checking this website for clarifications and/or addenda.

If Respondent chooses to download the RFP document, the Respondent must contact the Bid & Bond Room by faxing a legible copy of Respondent's business card, referencing Specification No. 124497 to (312) 744-5611 or by calling the Bid & Bond Room at (312) 744-9773 to register Respondent's company as an RFP document holder, which will better enable Respondent to receive any future clarifications and/or addenda related to this RFP. Respondents are responsible for obtaining all RFP materials.

Under no circumstances shall failure to obtain clarifications and/or addenda relieve a Respondent from being bound by any additional terms and conditions in the clarifications and/or addenda, or from considering additional information contained therein in preparing a Proposal. Furthermore, failure to obtain any clarification and/or addendum shall not be valid grounds for a protest against award(s) made under this RFP.

E. Deadline and Procedures for Submitting Proposals

1. Proposals must be received by the Bid & Bond Room no later than 4:00 p.m. Central Time on **February 25, 2015**.

2. The City may not accept Proposals that are not received by the date and time set forth in Section I.E.1 above. Only the City's Chief Procurement Officer, at her sole discretion, will determine whether to accept a Proposal received after the due date and time.

   Failure by a messenger delivery service or printing service to meet the deadline will not excuse the Respondent from the deadline requirement of this RFP. Hand-carried Proposals must be received in the depository located in the Bid & Bond Room. The actual time of the receipt of all Proposals to this RFP will be determined solely by the clock located in the Bid & Bond Room. It is the Respondent's sole responsibility to ensure that the Proposal is received as required.

3. The Proposals must be delivered to the following address:
   Jamie L. Rhee, Chief Procurement Officer

Department of Procurement Services
Bid & Bond Room
Room 301, City Hall
121 N. LaSalle Street
Chicago, Illinois 60602
Attention: Lisa Freelon-Gilbert, Senior Procurement Specialist

Respondents must submit one (1) original, two (2) paper copies, and fifteen (15) electronic copies of the Proposal on CD in PDF format on fifteen (15) separate CD-ROMS. The original Proposal must be clearly marked as “ORIGINAL” and on all documents, requiring a signature must bear the original signature of Respondent's authorized signatory. All documents and CD-ROMs must be clearly marked with the title of the RFP and the name of the Respondent. Respondent must enclose all documents in sealed envelopes or boxes.

4. Consistent with the City's practice of making available all information submitted in response to a public procurement, all proposals, any information and documentation contained therein, any additional information or documentation submitted to the City as part of this solicitation, and any information or documentation presented to City as part of negotiation of a contract or other agreement may be made publicly available through the City's Internet website.

However, Respondents may designate those portions of the Proposal which contain trade secrets or other proprietary data ("Data") which Respondents desires remain confidential.
To designate portions of the Proposal as confidential, Respondent must:

- Mark the cover page as follows: "This Proposal includes trade secrets or other proprietary data.”

- Mark each sheet or Data to be restricted with the following legend: "Confidential: Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this RFP."

- Provide a CD-ROM with a redacted copy of the entire Proposal or submission in .pdf format for posting on the City's website. Respondent is responsible for properly and adequately redacting any Data which Respondent desires remain confidential. If entire pages or sections are removed, they must be represented by a page indicating that the page or section has been redacted. Failure to provide a CD-ROM with a redacted copy may result in the posting of an un-redacted copy.

Indiscriminate labeling of material as "Confidential" may be grounds for deeming a Proposal as non-responsive.

All Proposals submitted to the City are subject to the Freedom of Information Act. The City will make the final determination as to whether information, even if marked "confidential," will be disclosed pursuant to a request under the Freedom of Information Act or valid subpoena. Respondent agrees not to pursue any cause of action against the City with regard to disclosure of information.

5. The outside of each sealed envelope or box must be labeled as follows:

Proposal Enclosed
Request for Proposals for Public Address System Upgrades for O’Hare International Airport
Specification No. 124497
Due: February 25, 2015
4:00 p.m. Central Time

Submitted by: _____
(Name of Respondent)
Package_____of _____

The City's opening of Respondent's sealed envelope(s) or package(s) containing a Proposal shall neither be deemed nor constitute acceptance by the City of Respondent's Proposal. The City reserves the right to open and inspect all such sealed envelope(s) or package(s), regardless if the same were submitted by the due date and time specified herein, for any purpose, including without limitation, determining the particular RFP to which Respondent has responded, determining if a Proposal was submitted by the date and time specified in this RFP, and in order to determine a Respondent's return address.

F. Procurement Timetable

The timetable for the selection process is summarized below. Note that these target dates are subject to change by the City.

Key Activity	**Target Date**
City Issues RFP	**November 24, 2014**
Pre-Submittal Conference	**December 9, 2014**
RFP Questions and Clarifications Due	**December 23, 2014**
Proposals Due	**February 25, 2015**

G. Conflicts of Interests

For the purposes of this Section I.G only, the term "Respondent" shall mean the entities that submit Proposals in response to this RFP and, if Respondent is a joint venture or limited liability company, any partner in the joint venture or any member of the limited liability company.

Respondents will be subject to the following conflicts of interest rules:

Conflict of Interest: The Evaluation Committee ("**EC**") will consider any information regarding Respondent, including information contained in Respondent's Proposal, that may indicate any conflicts (or potential conflicts) of interest which might compromise Respondent's ability to successfully perform the proposed Services or undermine the integrity of the competitive-procurement process. If any Respondent has provided any services for the City in researching, consulting, advising, drafting or reviewing this RFP or any other services related to this RFP, such Respondent may be disqualified from further consideration.

II. REQUIRED INFORMATION

Each Proposal must contain all of the following documents and must conform to the following requirements.

A. Format

Proposals responding to this RFP should be prepared using a font no smaller than 10 point on 8 ½" X 11" letter size paper (preferably recycled), printed double-sided and bound on the long side. The City encourages using reusable, recycled, recyclable and chlorine-free printed materials for Proposal, reports, and all other documents prepared in connection with this RFP. Expensive papers and bindings are discouraged as no materials will be returned.

Proposals must be submitted in two separately-bound volumes. The first volume must contain the Respondent's Statement of Qualifications and must be labeled *"Volume I, Statement of Qualifications"*; the second volume must contain representations and certifications as described herein and must be labeled *"Volume II, Representations and Certifications"*.

Each separate volume and individual sections should be clearly identified and/or separated by labeled tabs and organized in accordance with subject matter sequence as set forth below.

B. Volume I - Required Content

Respondents are advised to adhere to the submittal requirements of this RFP. Failure to comply with the instructions of this RFP, including but not limited to the page limitations set forth below, may be cause for rejection of the non-compliant Proposal. Submission of a Proposal constitutes the Respondent's acceptance of all requirements outlined in the RFP. By submitting a response to this RFP, Respondent acknowledges that if its Proposal is accepted by the City, its Proposal and related submittals may become part of the Contract.
The Proposal must include the following information:

1. **Cover Letter – limit of one page**

Respondent must submit a cover letter, signed by an authorized Respondent representative, committing Respondent to providing the Services in accordance with its Proposal and the terms and conditions of any Contract, which may be awarded pursuant to this RFP.

2. **Executive Summary – limit of three pages**

Respondent must provide an executive summary, which addresses the following information:

A. Outline the number of years Respondent has been in business and identify Respondent's legal name, its headquarters address, its principal place of business, its legal form (i.e., corporation, joint venture, partnership), the names of its principals or partners, and whether Respondent is authorized to do business in the State of Illinois. If Respondent is a business entity comprised of more than one (1) legal entity, Respondent must identify all legal entities so comprising Respondent; it must identify each entity's respective ownership percentage of Respondent; and Respondent must summarize the role, degree of involvement and experience of each such separate entity;

B. Indicate the name, mailing address, email address, and telephone number(s) of the principal contact for oral presentation or negotiations;

C. Explain its understanding of the City's intent and objectives and its approach to achieving those objectives;

D. Provide a brief summary of the qualifications, experience and background of the team and its committed Key Personnel (as herein defined);

E. Summarize Respondent's commitment to comply with the MBE/WBE requirements as stated in the Special Conditions Regarding Minority Business Enterprise ("**MBE")** and Women Business Enterprise (**"WBE**") Commitment, attached to this RFP as Exhibit 3; and

F. Respondent must identify any exceptions or objections it has to the City's sample Professional Services Contract (**"PSC**"), a copy of which is attached hereto as Exhibit 6. The City may from time to time revise the PSC. The City will not accept or entertain any exceptions or objections to the PSC at any time after Proposal submittal except and only to the extent the City subsequently makes a material change to a substantive provision of the PSC.

3. **Company Profile – limit of one page (plus any attachments required by the provisions below)**

Respondents must briefly describe their legal structure and the way in which their business is organized.

If Respondent is a joint venture, attach a copy of the joint venture agreement signed by an authorized officer of each joint venture must be attached. Each joint venture must execute:

a. Schedule B as shown in Exhibit 3, if Respondent's joint venture team includes a City-certified MBE/WBE firm(s), as applicable; and

b. Separate Economic Disclosure Statement and Affidavits **("EDS")** for each joint venture partner, a copy of which is attached hereto as Exhibit 4.

If Respondent is a limited liability company, a copy of the operating agreement signed by an authorized member or manager of the limited liability company must be attached. Each member of the limited liability company must execute a separate EDS as shown in Exhibit 4.

Note that the EDS forms should be placed in Volume II of the Proposal.

4. **Project Understanding and Approach – limit of ten pages plus a Team Organizational chart**

Respondent must describe its interest, understanding and approach to providing Services for the Project. Respondent must include an explanation of its approach to management. Also to be included are: a plan for implementing and monitoring the Services; organizational chart showing the relationship between all team-member firms; the roles and responsibilities of team-member firms; strategies, tools and safeguards for ensuring timely, quality performance of all required timely Services; equipment, software and hardware considerations; training and on-going support; and any additional factors for the City's consideration.

Any subcontractors who will be performing Services on this Project, including their designation as MBE/WBE/BEPD, should be listed along with discussion of their roles and responsibilities.

5. **Professional Qualifications and Specialized Experience – limit of two pages plus ten pages for Project Reference Forms**

Respondents must describe their qualifications and specialized experience necessary to provide the Services. This description should include similar experience at other airports or in managing similar programs. This description should also include the

proposed organizational structure, lists of key personnel and description of all personnel who will provide the Services. Regarding prior similar experiences, highlight key issues faced and innovative solutions used.

Respondent must also provide the information on the Project Reference Form included as Exhibit 7 in this RFP. One Project Reference Form is required for each referenced project. Exhibit 7 may be modified for presentation purposes, but must include all requested information; there is no page limit for individual projects; however, the maximum total for all projects is ten pages and no more than one project may be included on any Project Reference Form.

6. **Professional Qualifications, Specialized Experience and Local Availability of Key Personnel Committed to this Project - limit of three pages plus a Staff Organization chart plus Resumes**

a. In three (3) pages or less, Respondent must describe the professional qualifications and experience of the individuals who will be dedicated to providing the Services on the Project. Respondent must provide an organization chart identifying, at a minimum, the "Key Personnel" who will participate in the following major components of the Project:

   Respondent must indicate each proposed person's areas of expertise, and which person will have prime responsibility for various tasks or aspects of the Project All Key Personnel must have significant and relevant experience in the area for which they are proposed to provide Services.

b. Respondent must indicate the local availability and time that each Key Personnel would be dedicated to this Project.

Respondent must submit resumes or corporate personnel profiles of all staff (maximum two pages per individual) which demonstrate relevant past experience for each proposed staff member and Key Personnel.

7. **MBE/WBE Participation Plan and Commitment – limit of three pages**

Respondent must describe its plan for MBE/WBE participation and commitment to achieving meaningful technical and financial goals. The current MBE participation goal is 25% of the total contract value, and the current WBE participation goal is 5% of the total contract value. Consistent with the City's practice of encouraging and facilitating the participation of MBEs and WBEs in prime contractor roles on City projects, the City urges Respondents to partner with MBE and/or WBE firms at the prime contractor level. To be eligible for favorable consideration under the Prime Contractor element of the criteria, proposed MBE and/or WBE participation on a Respondent's team must include well-defined management roles and responsibilities for the MBE and/or WBE team members and must allocate to the MBE and/or WBE financial risk commensurate with the financial rewards available to be achieved by a successful Respondent.

8. **Cost Proposal – limit of seven pages**

Respondent must submit a Cost Proposal based on Annual Budget. The City is requesting detailed information regarding the cost plus fixed fee methodology for the Services required. In Exhibit 2, provide details of the cost plus fixed fee methodology in the Schedule of Compensation. Respondent is responsible for disclosing any charges or fees over and above the cost plus fixed fee methodology listed in Schedule of Compensation that the City would incur before, during, and after the transition of services.

Based on the City's need to compare Schedule of Compensation between Respondents, Respondents should not deviate from the compensation methods outlined in Exhibit 2. The City reserves the right to negotiate terms and conditions

with the selected Respondent(s).

C. Volume II - Required Content

1. **Conflict of Interests**

If applicable, Respondent must provide a statement and information regarding conflicts of interest required pursuant to Section I.G.

2. **Respondent's Corporate History**

Respondent must provide a chronological history of all mergers and/or acquisitions (if any) involving the Respondent and each legal entity comprising Respondent, including all present and former subsidiaries or divisions and any material restructuring activities, if applicable. Include any such forthcoming actions, if such disclosure has already been made generally available to the public and is permitted by law.

3. **Legal Actions**

Respondent, or each separate legal entity comprising Respondent, if applicable, must provide a listing and a brief description of all material legal actions, together with any fines and penalties, for the past five (5) years in which (a) Respondent any division, subsidiary or parent company of Respondent, or each separate legal entity comprising Respondent, or (b) any member or partner of Respondent, if Respondent is a business entity other than a corporation, has been:

a. a debtor in bankruptcy;
b. a defendant in a legal action for deficient performance under a contract, in violation of a statute or related to service reliability;
c. a respondent in an administrative action for deficient performance on a project , in violation of a statute or related to service reliability;
d. a defendant in any criminal action;
e. a named insured of an insurance policy for which the insurer has paid a claim related to deficient performance under a contract, in violation of a statute or related to service reliability;
f. a principal of a bond for which a surety has provided contract performance or compensation to an oblige of the bond due to deficient performance under a contract, in violation of a statute or related to service reliability; or
g. a defendant or respondent in a governmental inquiry or action regarding the accuracy of prepared financial statements or disclosure documents.

4. **Financial Statements**

Respondent, or each separate legal entity comprising Respondent, if applicable, must provide a copy of its **most recent audited financial statements**. The City reserves the right to accept or reject any financial documentation other than the audited financial statements.

5. **Economic Disclosure Statement and Affidavit ("Disclosure Affidavit")**

Respondent, or each separate legal entity comprising Respondent, if applicable, must submit a completed and executed Disclosure Affidavit, attached hereto as Exhibit 4. If the Respondent is a business entity other than a corporation, then each member or partner of the Respondent must complete a Disclosure Affidavit. In addition, any entity that has an interest in the Respondent or in one or more of

its members or partners and is required pursuant to the Municipal Purchasing Act for Cities of 500,000 or More Population (65 ILCS 5/8-10-8.5) ("**Municipal Purchasing Act**") or Chapter 2-154 of the Municipal Code of Chicago to provide a disclosure must submit a completed and executed Disclosure Affidavit as an "entity holding an interest in an Applicant" as described in the Disclosure Affidavit. All affidavits must be notarized.

6. **MBE/WBE Documentation**

Respondents must provide an original, fully executed Schedule D-1 indicating the MBE/WBE entities a Respondent proposes to include as part of its Proposal. The Schedule D-1 must indicate the participation percentage proposed for each MBE/WBE entity. The total dollar amount for each entity should be shown as Depends Upon Requirements ("**DUR**").

Respondents must also provide original, fully executed Schedules C-1 for each MBE/WBE entity listed on the Schedule D-1. Each Schedule C-1 must include a copy of the *current certification letter* issued by DPS. **Each MBE/WBE entity must be certified by the City at time of Proposal submission**.

Respondents must comply with the Special Conditions Regarding Minority Business Enterprises and Women Business Enterprises Commitment attached as Exhibit 3. Failure to comply with this requirement may result in disqualification from this RFP process.

If the Respondent is joint venturing with an MBE/WBE firm then the Respondent must submit a fully executed Schedule B and a copy of the joint-venture agreement.

7. **Insurance**

Respondents are **NOT** required to submit evidence of insurance with the Proposal but must submit evidence of insurability indicating that if awarded a Contract the Respondent will provide evidence of insurance in the amounts specified in Exhibit 5. Prior to award of a Contract, the Respondent selected to perform the Services must submit evidence of insurance in the amounts specified and in the form provided in Exhibit 5. If Respondent is a joint venture or limited liability company the evidence of insurability and evidence of insurance, if awarded a Contract, must be in the name of the joint venture or limited liability company.

III. EVALUATION OF PROPOSALS

A. Evaluation Committee and Short-listing Process

An Evaluation Committee ("**EC**"), which may include representatives of the Department, DPS, and other City departments, will review and evaluate the Proposal. The City reserves the right to enlist independent consultants to assist with the evaluation of all or any portion of the Proposal, as it deems necessary. The EC will first assess the Respondent's compliance with and adherence to all Volume I and Volume II of the submittal requirements. Any Proposal which is incomplete and missing key components necessary to fully evaluate the response may, at the discretion of the CPO, be rejected from further consideration due to "non-responsiveness" and rated Non-Responsive.

The EC will then evaluate the extent to which a Response meets the Project requirements set forth in the RFP, including but not limited to a detailed analysis of Volumes I and II of the Response. The focus of the evaluations will be on the Respondent's understanding and approach, qualifications, experience, proposed implementation plan, and other factors based on the evaluation criteria outlined in this section. The EC may also review any other information that

is available to it, including but not limited to information gained by checking references and by investigating the Respondent's financial condition.

The City reserves the right to seek clarification of any information that is submitted by any Respondent in any portion of its Proposal or to request additional information at any time during the evaluation process. Any material misrepresentation made by a Respondent may void the Response and eliminate the Respondent from further consideration.

After the EC completes its review of Proposals, it may submit to the Commissioner of the Chicago Department of Aviation (the **"Commissioner**"): (1) a recommended short list of Respondents for further consideration; (2) a recommendation to select one or more Respondent(s) or (3) a recommendation to reject any or all Proposals.

If the EC submits a short list of Respondents for further review, then, in the sole discretion of the Commissioner, those short-listed Respondents may be subject to a site visit and/or be invited to appear before the EC for an oral interview, to clarify in more detail information submitted in a Proposal and/or to ask Respondents to respond to additional questions. The format of the oral interviews may require short-listed Respondents to respond to technical questions presented in advance of or at the time of the interview.

If the City elects to conduct oral interviews, the short-listed Respondents must be available to participate in these interviews including, at a minimum, the proposed Project Manager and Key Personnel. The proposed Project Manager and Key Personnel must be prepared to address the subjects and requirements for the Public Address System Upgrades.

The EC will then make a final evaluation and will submit a recommendation for one or more Respondents to the Commissioner. If the Commissioner concurs with the selection recommendation from the EC, the Commissioner will forward such concurrence and recommendation to the CPO for authorization to enter into contract negotiations with the selected Respondent(s).

The City will require the selected Respondent(s) to participate in contract negotiations, including but not limited to negotiations regarding compensation. The City's requirement that the selected Respondents negotiate is not a commitment by the City to award a Contract, nor is such requirement an opportunity for Respondents to take exception or objection to any part of the PSA, which it did not take exception or objection to as allowed in this RFP. If the City determines that it is unable to reach an acceptable Contract with a selected Respondent, including failure to agree on a fair and reasonable compensation for the Services or any other terms or conditions, the City may terminate negotiations with such selected Respondent(s), and may commence negotiations with any of the other Respondent(s) until such time as the City has negotiated a Contract meeting its needs.

B. Evaluation Criteria

The City will review each Respondent's Proposal using the following criteria (in no particular order of importance or evaluation weight):

1. Ability to meet the service requirements described in Exhibit 1, Scope of Services and Section III.B., above;

2. Technical and professional Competence as Evidenced by:

    a. Each Respondent's overview, project understanding and approach, plan for implementing, management techniques and resources required to provide the Services.

    b. Each Respondent's demonstrated professional qualifications, capabilities, specialized experience, knowledge, organizational management and relevant skills to provide services for the Public Address System Upgrades, in an expedited, streamlined

environment (and/or US airports preferred).

c. Each Respondent's key personnel, their availability, professional qualifications, and specialized experience.

3. Each Respondent's systems, management techniques, required expertise and resources designed to facilitate effective decision-making, and stakeholder coordination and control; Preference will be given to firms with significant experience and knowledge of all components of the Services required per Exhibit 1, Scope of Services of this RFP;

4. The EC will consider each Respondent's detailed cost proposal as indicated in Exhibit 2. Respondent's cost proposal is important, however, it is not the sole factor in the evaluation process. Each Respondent's qualifications and cost proposal will be evaluated to determine a best value Proposal to the City. The best value Proposal to the City will be that responsive and responsible Proposal that will achieve highest score based upon qualifications and price.

5. Completeness and comprehensiveness of each Respondent's Response to this RFP, compliance with the submittal requirements, and all applicable local, City, State and Federal laws, ordinances and statutes and requirements including required disclosures and certifications;

6. Legal actions that might affect each Respondent's ability to perform as contracted;

7. Financial capacity to deliver the required Services;

8. Absence of any relationship that could constitute a conflict-of-interest or otherwise impede the ability of the Respondent to protect the interests of the City;

9. The level, relevance and quality of the proposed MBE/WBE utilization plan. In cases where multiple Respondents have demonstrated equivalent capabilities, resources and experience to provide the Services, preference may be given to Respondents who have established a joint venture or other team structure that affords MBE and WBE firms an equity position within the prime-contracting entity, and/or incorporates other capacity-building or innovative-utilization initiatives. The City will also consider MBE/WBE participation on each Respondent's prior contracts with the City, if applicable;

10. Each Respondent's demonstrated ability to meet the compliance with Insurance requirements identified in Exhibit 5.

11. Each Respondent's willingness to take no exceptions to the PSC attached to this RFP as an Exhibit 6; and

12. Outcome of oral interviews including technical analysis and presentation (if requested by the City);

IV. CONFIDENTIALITY; PUBLIC INFORMATION

Respondents may designate those portions of a Proposal, which contain trade secrets, or other proprietary data ("**Data**") which Respondent desires remain confidential. If a Respondent includes Data that is not to be disclosed to the public for any purpose or used by the City except for evaluation purposes, the Respondent must:

A. Mark the title page as follows: "This Proposal includes trade secrets or other proprietary Data that may not be disclosed outside the City and may not be duplicated, used or disclosed in whole or in part for any purpose other than to evaluate this Proposal. The City, for purposes of this provision, will include any consultants assisting in the evaluation of Proposal. If, however, a Contract is awarded to this Respondent as a result of or in connection with the submission of this Data, the City has the right to duplicate, us

disclose the Data to the extent provided in the resulting Contract. This restriction does not limit the City's right to use information contained in the Data if it is obtained from another source without restriction. The Data subject to this restriction are contained in sheets (insert page numbers or other identification)."

B. Mark each sheet or Data to be restricted with the following legend:
"Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this Proposal."

C. Indiscriminate labeling of material as "Confidential" may be grounds for deeming a Proposal as non-responsive.

D. **All Proposals submitted to the City in response to this RFP are subject to the Illinois Freedom of Information Act.** The City will make the final determination as to whether the information will be disclosed pursuant to a request under the Freedom of Information Act or valid subpoena. Respondent agrees not to pursue any cause of action against the City with regard to disclosure of this information.

E. Consistent with the City's practice of making available all information submitted in response to a public procurement all Proposals, any information and documentation contained therein, any additional information or documentation submitted to the City as part of this RFP, and any information or documentation presented to City as part of the negotiation of a Contract will be made publicly available through a Website hosted by the City. Data will only remain confidential if Respondent has marked the documents containing such data in the manner required by this Section IV.

V. ADDITIONAL DETAILS OF THE RFP PROCESS

1. Addenda

If it becomes necessary to revise or expand upon any part of this RFP, an addendum will be sent to all of the prospective Respondents listed on the "Specification Take-Out-Sheet" prior to the Proposal due date. Prospective Respondents are automatically included on the Specification Take-Out Sheet when they sign for a copy of the RFP package in the Bid & Bond Room, request that the Bid & Bond Room personnel mail them a copy, or download the RFP document per the instructions and requirements in Section I.D.3. Each addendum is incorporated as part of the RFP documents, and receipt must be acknowledged by the prospective Respondents in the Cover Letter of their Proposals or as otherwise directed herein.

The addendum may include, but will not be limited to, the following:

1. A change of the Response due date;

2. Clarifications to Respondents questions; and

3. Terms and conditions the City anticipates will be included in the final signed contract.

2. City's Rights to Reject Proposal

The City is under no obligation to award a Contract pursuant to this RFP and, acting through the CPO, reserves the right to reject any and all Proposals. The City reserves the right to use any other procurement method available under applicable law to obtain the Services described herein.

3. No Liability for Costs

The City is not responsible for any costs or damages incurred by Respondents, its team member(s), subcontractors or other interested parties in connection with the RFP process, including but not limited to costs associated with preparing the Proposal, and/or participation in any conferences, oral presentations or negotiations.

EXHIBIT 1: SCOPE OF SERVICE

I. Purpose

The Work consists of furnishing all means, methods, labor, materials, tools, equipment, transportation and services for performing the upgrades to the Public Address System for O'Hare International Airport as described in Exhibit 1 attachment 1 through 4, including all appurtenant work and accessories, to the complete satisfaction of, approval and acceptance by the City. This includes, but not limited to,

1. The work necessary to design, upgrade, add, enhance, automate and construct as one, the digitally upgraded Public Address Systems general and emergency announcements at O'Hare International Airport hereafter referred to using the acronym "OPA". These announcements must have the capability of being dispatched via computer terminals with preloaded paging system software that enables canned messages and other commonly used paging features to be displayed and/or heard. In addition to announcement dispatch via computer terminals, analog dial-in phones/Jet Bridge microphone dispatch capability is a required feature of the OPA. The OPA Upgrade must be accomplished without interruption to the functionality of the existing system.

2. The work will also include an upgrade to the existing Public Address System with the most current hardware/software components including, text for display on a video monitor, text to audio, and audio paging in the ORD locations listed. Terminals: 1, 2, 3, 5, Bus Shuttle Center, Airport Transit System (ATS) stations, the ATS control center, and the Ring Tunnel. Additionally, provide design zone paging in Pedestrian walkways near ORD terminals, Elevated Parking Structure and outside parking lots. Additional speakers will be required in airline offices, clubs, private and back of house areas.

3. Additional features include Dispatch Terminals with Automated Dispatch Software to save and store messages in a pull down menu complete with zone maps and codes. The Data Terminals should allow for storing and playing unique messages by gate.

4. An Uninterruptible Power Supply (UPS) System providing full power conditioning with minimum of thirty (30) minutes of reserve power at each head end location shall be provided. All normal electrical power should come from the Utility Source (ComED). In the event of a power outage, ORD Stand By and Emergency Generator should start within ten (10) seconds after loss of normal source power. Generators will be installed under a separate project not included in this scope of work. During this interval time (10 seconds), UPS System must provide full power.

5. The work will include a detailed evaluation, written and graphic documentation of the entire existing PA System Equipment infrastructure, including: amplifiers, speakers, speaker cables and ambient sensors, as much as possible. Additionally, the existing zone code identification should be retained but these codes can be combined into a new zone as recommended by the vendor with the concurrence of the CDA. <u>All existing individual speaker wiring must be traced electronically from source point to final use point. All locations to be graphically documented. Report the condition of each speaker and its associated cabling.</u>

6. The new Public Address System must be menu based with capability for future customized programming. This system will meet all ADA Compliance regulations, CDA Design Specifications and CDA Design and Construction Standards.

7. Design and construct a Visual Paging System for the hearing impaired. The system scope and operation is defined later in this paragraph, item # 15.

8. The construction of this system upgrade will be completed in phases while the existing system not yet replaced, must be kept in operating condition.

9. Field construction and testing working hours shall be defined as 10:00 PM to 5:00 AM Monday through Friday-where work occurs in those areas of the airport that are occupied by the public. Other areas of the airport not normally occupied by the public during normal business hours can utilize normal working hours.

10. Items specifically excluded from this scope of work:
    a. All speaker, cabling, conduit, and ambient noise sensors required within all airline hold rooms

    b. All speakers' ambient noise sensors, cable, and conduit required within existing E and F Concourses. Existing speakers and cabling shall remain operational as they are connected to the new system.

11. The equipment list, lists most of the public areas that will be provided with emergency all-call and public address notification. There are significant "back-of-house" areas not listed or shown on the reference drawings that will require notification. The full extent of these areas will not be known until after the existing system evaluation is completed.

12. Provide a Building Permit Plan Review Submittal to the City of Chicago in accordance with the current Chicago Building Code requirements. Attend meetings as required to resolve any issues with the plan examiners.

13. The current Public Address zones shall be expanded and/or tied in to existing and independent Public Address systems. Areas for expansion of Public Address coverage include parking lots, ATS stations, Bus Shuttle Center, and other work areas as shown in the list of existing facility reference drawings (see "reference document list").

14. Refer to "Reference document list" for a list of the reference drawings that are available.

15. Visual Paging (VP) Scope of Work

    a. Develop a standard configuration for VP monitor size, and text display. The physical size of the monitor may vary dependent upon its location.

    b. The VP Monitors should be located generally in the following areas:

        i. Terminals 1, 2, 3 and 5

        ii. All ATS Stations

        iii. Bus Shuttle Center

        iv. Adjacent to the existing Flight and Baggage Information displays in place within the various Terminals.

        v. Within 'long circulation areas' such as the Pedestrian Tunnel between Concourses B and C. There should also be locations chosen in the lower level pedestrian walkways connecting all of the lower level elevator centers serving the elevated parking garage. This includes the entry/exit to the CTA Blue Line. Other locations to be recommended by the Vendor.

        vi. Provide Visual Paging to all Security Check Points and CDA's information desks at O'Hare.

        vii. All "Clear Channel" digital display screens shall display the Visual Paging announcements.

    c. Provide convenience power as required for the VP monitor operation originating from the Terminal's emergency power system.

    d. Wherever possible the location of the VP monitors should not conflict with the architecture of the spaces in which they are located.

    e. Airline gate areas are to be excluded from this scope of work.

    f. All VP messaging and Emergency All-Call will be controlled and will originate from the OCC.

    g. The system design should be coordinated with the City of Chicago's Mayor's Office for People with disabilities

h. Utilize the existing Boingo WiFi network to distribute the VP content. Hard wire signal connections to be minimized.

i. VP Messages should have the capability of being zone controlled, i.e. Terminal 5 specific paging does not have to be displayed in Terminal 1.

j. Provide the capability for transmitting Visual Paging information to the public's "smart phones" systems.

16. Evaluate the existing public address system equipment within terminals and areas.

17. Supply and install a turnkey public address system, to include equipment and materials, whether specifically mentioned herein or not, to ensure a complete and operating system.

18. System refers to the complete and functional assemblage of equipment required to achieve the specified functionality, performance, and design intent. This shall include, but not be limited to, ancillary items such as power supplies, interfaces, transformers, UPS systems, cable and connectors.

19. Generate submittal information for the complete fabrication, installation and wiring of the system. Provide the on-site installation and wiring, and provide on-going supervision and coordination during implementation.

20. Provide for the initial adjustment of the systems as herein prescribed and provide test equipment for the system checkout and acceptance test. Prior to the systems acceptance tests, submit an initial testing and tuning report showing methods and results for tests performed.

21. Provide on-the-job training in the operation and maintenance of the systems for the personal designated by the Owner from date of system acceptance for system installed.

22. Continue a maintenance program for 9 years after the initial warranty period expires.

23. Provide As-Built documentation to the Owner following system installation and acceptance tests.

II. Qualifications

The Contractor shall possess and provide sufficient evidence of experience in provision of comparable Public Address System Upgrades. The Contractor shall have substantial experience providing such Services of comparable size and complexity as anticipated for Public Address System. The Respondents shall provide a list of three (3) to four (4) recent projects covering similar type of service which are required by the City as described herein. The list shall include the account name, contact person, phone number, size of the project, dollar value of firm's involvement, project staffing, length of services provided, litigation, if any, associated with the project (that the Consultant is involved in), and any issues where the Consultant was considered negligent or in the noncompliance with the services required on that project. The Chief Procurement Officer's determination regarding the relevance of experience will be final.

III. Respondent's Submittal

The following information must be submitted by the Respondent with its proposal so that Respondent's responsiveness, responsibility, and qualifications can be evaluated:

The following are the Attachments to this Scope of Services:

1. Vendor Requirements and Qualifications (Attachment 1)
2. Existing Conditions (Attachment 2)
3. Project Execution (Attachment 3)
4. Project Specifications and Equipment List (Attachment 4)

IV. List of Acronyms

ADA	Americans with Disabilities Act
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
ATS	Airport Transit System
BOM	Bill of Material
CDA	Chicago Department of Aviation
CD	Compact Disc
COTS	Commercial Off The Shelf
CPI	Consumer Price Index
CPU	Central Processing Unit
EPS	Elevated Parking Structure (Lot A)
FCC	Federal Communications Commission
GB	Gigabytes
HMTL	Hyper Text Markup Language
IEEE	Institute of Electrical and Electronics Engineers
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NTP	Notice to Proceed
OPA	O'Hare Public Address System
PDR	Preliminary Design Review
PMP	Project Management Plan
SAT	System Acceptance Test
SDD	System Design Document
TCP/IP	Transfer Control Protocol/Internet Protocol
UL	Underwriters Laboratory
UPS	Uninterruptable Power Supply
UTP	Unshielded Twisted Pair

V. Key Terms

Term	Definition
"Airport"	Chicago O'Hare International Airport.
"Bidder"	An entity that provides a bid in response to the RFP.
"City"	The City of Chicago.
"Commissioner"	Commissioner of the Chicago Department of Aviation.
"Contractor"	The successful Bidder selected and contracted to install and maintain the OPA as defined in the Technical Specifications. The Contractor may also be referred to as the Vendor as these terms are used interchangeably throughout this Contract.
"OCC"	The O'Hare Communication System is located on the lower level of the elevated parking garage All messages sent over the OPA originate here.
"OEMC"	The O'Hare Emergency Management Center.
"IMC"	Instant Messaging Center.

“Final System Acceptance”	CDA final acceptance of the OPA acknowledging that the Vendor has successfully delivered the OPA and fulfilled the contract requirements.
“FlyChicago.com”	The O’Hare website maintained by the City of Chicago used as a general clearinghouse for airport information.
“Head End ”	These are the main equipment room locations for all data transfer to the various paging zones throughout the airport. The signals originate at these points and are transmitted to the speaker zones via cable connections.
“System Acceptance Test (SAT)”	The System Acceptance Test will be performed on each subsystem as defined in Exhibit 1- Attachment 4- Part 3-Paragraphs IV and V.
“System Design Document”	Document developed by the Vendor describing the System requirements, operating environment, system and subsystem architecture, files and database design, input formats, output layouts, human-machine interfaces, detailed design, processing logic, and external interfaces.
“Vendor”	The successful Bidder selected and contracted to install and maintain the OPA as defined in the Technical Specifications. The Vendor may also be referred to as the Contractor, and these terms are used interchangeably throughout this Contract.

Exhibit 1 (Continued)

ATTACHMENT 1: VENDOR REQUIREMENTS AND QUALIFICATIONS

The Vendor will be required to maintain certain minimum standards with respect to project team, key personnel and performance:

- Project Team members must be qualified to complete assigned work
- Documentation is required for all degradation of the existing system
- Vendor must not cause unplanned loss of service to Airport facilities

Key Personnel Requirements
The Vendor is required to field a team that consists of individuals qualified to do the assigned work. Project team members are subject to approval by the CDA. Attached to this Scope of Services is a list of the key personnel, Attachment 3 Paragraph I.C.2

Performance Requirements
This project will directly impact the users of the OPA and it is incumbent upon the Vendor to make every effort to maintain the current level of OPA functionality. The Vendor will be held accountable for all project activities throughout the duration of the project. Inadequate or non-performance of any of the essential tasks necessary to complete the OPA project will, at the discretion of the CDA, result in dismissal of project team members or assessment of actual damages incurred.

A. Project Team/Member Failure to Perform

Any project team member(s) or subcontractor(s) that fails to adequately perform with respect to project schedule or quality of work may be subject to replacement by the Vendor. The CDA will address concerns regarding lack of performance with the Vendor, but if performance issues are not corrected, the CDA reserves the right to require the project team member or members to be replaced by the Vendor. Replacement team members will be subject to CDA approval.

The CDA reserves the right to assess actual damages incurred if the Vendor fails to remedy project performance issues in a timely manner.

B. Loss of OPA Operation

The CDA understands that some degradation of OPA operation and associated infrastructure will be related to the installation of the new OPA. Those events should be minimized in duration with full operations restored as soon as possible after the event is recognized.

C. Damage to Airport Infrastructure

The Vendor will also be held accountable for any unexpected damage or loss of service of Airport facilities. The Vendor is responsible for reporting any damage to Airport infrastructure to the CDA along with steps required to repair the damage. The CDA reserves the right to assess actual damages incurred until the infrastructure is fully restored.

D. System Description

The System to be provided by the Vendor must:

- Leverage the latest technology to achieve high performance at the lowest cost
- Allow for technology upgrades without disruption to production operations
- Support the ability of the CDA to add additional volume in terms of speaker locations, devices, or facilities to meet changing public address system requirements without significant modifications (other than the additional devices)
- Provide mobile device application that assist customers with the Visual Paging System

ATTACHMENT 2: EXISTING CONDITIONS

I. EXISTING SYSTEM EVALUATION

A. Project Site Conditions and Work Locations

The airport's public address system will be provided in all Terminal Areas. In addition the emergency all-call system will be provided in all work areas as shown on the map below and as listed in Table 1, "Work Area Descriptions".

Table 1 – Work Area Descriptions

- Public Concessions (Terminal Areas)
- Restrooms
- Private Clubs (Terminal Areas)
- Customer Service Locations (Terminal Areas)
- Tenant Space
- Security Check Points (30 locations within Terminal Areas)
- Pedestrian Walkways (Terminals 1, 2, and 3)
- Pedestrian Walkway Concourse B to C
- Baggage Claim Areas (Terminals)
- Package Pick-up (Terminals)
- Upper Roadway- All Doors (Terminals)
- Lower Roadway- All doors (Terminals)
- Elevator Centers (Elevated Parking Structure)
- Bus Shuttle Center
- CTA - Main Entry Area Only (Lower Level Pedestrian Walkway Entrance)
- Elevated Parking Garage
- Exterior At-Grade Parking Lots
- ATS Platforms
- ATS Control Center
- Car Rental Lots
- City and Suburban Cab Lots
- H & R Plant
- Entire Ring Tunnel
- TSA Tenant Space
- CBP Tenant Space T5 Only

B. Definition of Terms

1. The term "shall" is mandatory; the term "will" is informative; the term "should" is advisory.

2. The term "custom" indicates systems or components that shall be fabricated by the Contractor based on these specifications and drawings.

3. The term "OFE" refers to Owner Furnished Equipment. Provide for removal, relocation and testing prior to installation. Coordinate the integration of existing components or new components, provided by the Owner into the public address system. Provide required mounting hardware, rack panels, cable, connectors, etc. to ensure proper operation of the OFE systems as specified.

4. The term "A/R" indicates component quantities as required.

5. The term "NIC" refers to work or equipment that is not in contract covered in this section.

6. The term “future” indicates equipment that will be added to the systems by the Owner or Owner representative at a later date. Provisions shall be made for this equipment.

7. The term “or equal” indicates equal in materials, size, color, design, function, and performance of specified and conforming with base bid manufacture/model.

8. The term “CDA” refers to the Chicago Department of Aviation: Owner of the project.

9. The term “Owner’s Representative” refers to Care Plus LLC, the personnel having project oversight services contracted directly to the CDA.

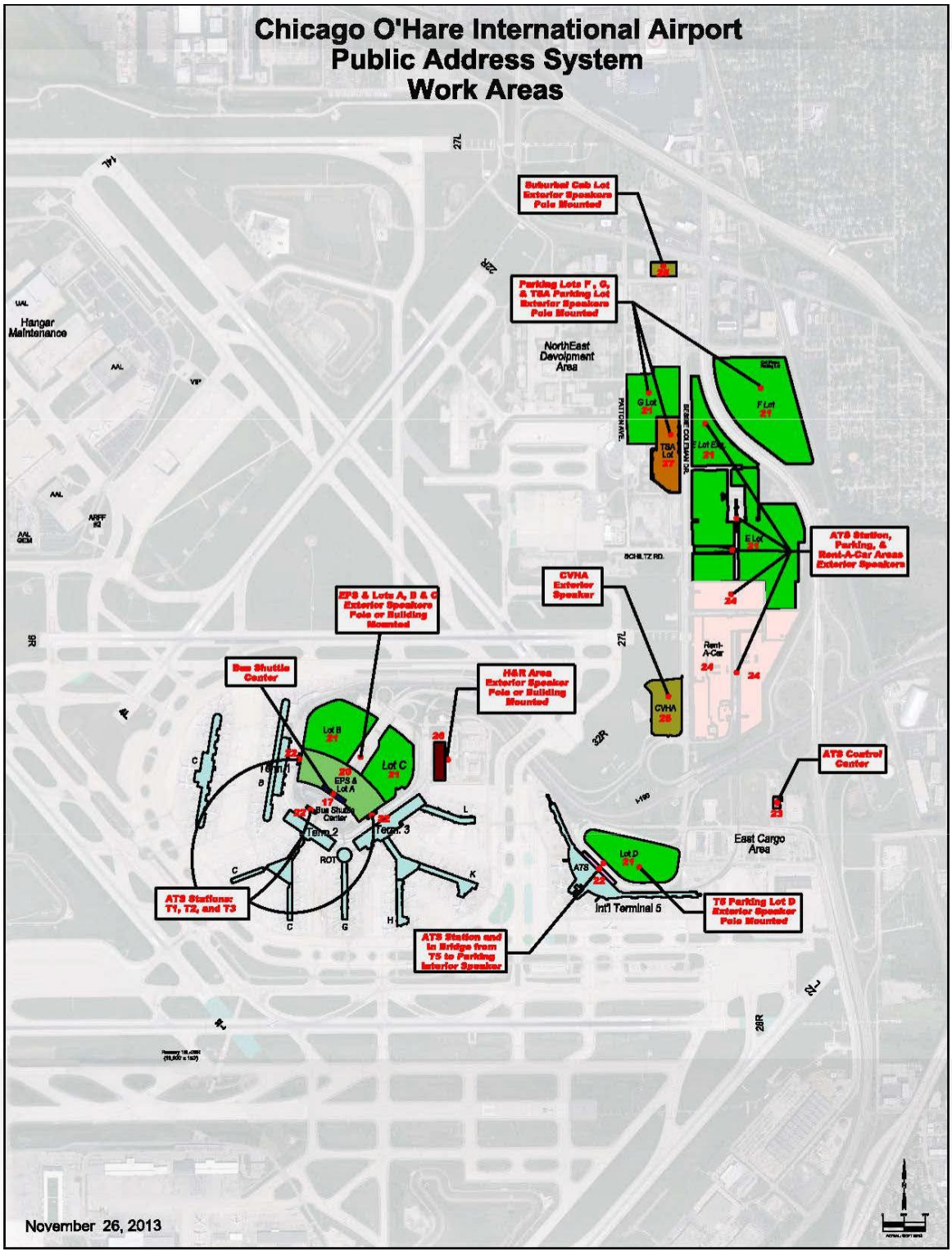
10. The term “OPA” refers to the Public Address System, the sound amplification system to provide general information announcements within the public areas of the airport.

11. The term “PA Zones” refers to the Public Address Zones the locations where PA system coverage is provided.

12. The term “PA Circuits” refers to the individual cabling where PA system loudspeakers are connected.

13. The term “ANS” refers to the Ambient Noise Sensing System, the system for automatic adjustment of the PA Zones output levels in response to local changes in ambient noise levels.

14. The term “OCC” refers to the Operations Control Center, the central location at O’Hare for general security and emergency operations.



Note: See reference drawing list for an enhanced plan

C. General

1. The Contractor shall evaluate the existing OPA and associated infrastructure in Terminals 1, 2, 3, 5 and the work areas described in Table 1.

2. The OPA evaluation shall not interrupt normal operations of the airport facilities or existing OPA.

3. The Contractor shall prepare an evaluation plan and schedule to be reviewed with the Owner and Owner's Representative before commencement of field work.

D. Work Areas

1. For all identified work areas without loudspeakers, the Contractor shall provide the following evaluation services:

    a. Conduct a physical inspection of field conditions where new loudspeakers are proposed.

    b. Conduct a physical inspection of field conditions for installation and routing new PA infrastructure (conduit, cabling, power, etc.) to existing circuits, existing head- end rooms, or new head-end room locations as required.

2. For all identified work areas with existing loudspeakers, the Contractor shall provide the following evaluation services:

    a. Conduct a physical inspection of field conditions and systems for work areas with local and independent OPA equipment.

    b. Identify and document the general location of existing loudspeaker circuits and zones by playing a broadband noise signal through each individual OPA amplifier channel via the line level input. Where applicable, use the OPA control system to play the broadband noise signal and identify loudspeaker circuits and zones.

    c. Evaluate and document the operational status and location of system ANS devices and system paging stations.

E. Head-End Equipment

1. For all CDA Terminal OPA, the Contractor shall provide the following evaluation services:

    a. Identify and document existing head-end equipment and hardware that will be reused or replaced in the PA system upgrade design. The following information from the existing equipment shall be collected and documented:

        i. Amplifier make/model, number of channels, input sensitivity, power rating and output impedance.

        ii. Contact closures and relay switches for signaling devices

        iii. Playback devices that provide background music from head-end locations

    b. Identify existing head-end equipment providing pre-recorded messages within the Terminal OPA control system. The pre-recorded message content, sequence, frequency of playback, and loudspeaker zone playback shall be documented. Provide digital files of the pre-recorded messages in WAV format.

F. Cabling

1. Identify and document the existing incoming/outgoing cabling infrastructure in OPA head-end equipment rooms.

    a. Document the infrastructure cabling using the existing cable labeling nomenclature.

    b. Infrastructure cabling documentation shall include cabling for:

        i. System microphones and paging stations.

        ii. Ambient noise sensors.

        iii. Loudspeaker circuits.

        iv. Network of fiber connectivity used for audio transmission, equipment monitoring and OPA system equipment link/communication.

        v. PBX phone lines connected to the PA system.

    c. Label and document the cabling in a format consistent with the other infrastructure labeling to allow identification and re-use in the replacement of the OPA head-end equipment.

    d. In the event cabling is not labeled, identify the OPA cabling through signal testing to identify the cabling use and destination. Document the cable type, topology, and gauge.

G. Loudspeakers and Zones

1. Identify and document the location of loudspeaker circuits and zones within the terminals by playing a broadband noise signal through each individual amplifier channel using the Terminal OPA control system.

2. Document the quantity of loudspeakers on each circuit. The output level and one-third octave band frequency response of each loudspeaker zone shall also be measured and documented per requirements in this document.

3. Document the location of OPA loudspeakers. Identify locations where the OPA loudspeakers are not working or are missing.

H. Ambient Noise Systems (ANS)

1. Evaluate and document the operational status and location of system ANS devices, system microphones and system paging stations.

2. Identify and document loudspeaker zones, the ANS microphones and Terminal OPA control system adjust. Document the corresponding ANS and loudspeaker zones and Terminal OPA control system settings for level adjustment including threshold, attack, gain, etc.

I. Faulty Equipment

1. Document all OPA equipment that is not operational, faulty, inappropriate for use, and/or disconnected from system with particular attention to OPA equipment out of the head-end room boundaries. Test any OPA equipment or infrastructure outside the head-end room that is found to be non-operational to determine if infrastructure, device, cabling, or head-end equipment is faulty.

J. Interface to PBX (Private Business Exchange) System

1. Identify and document PBX phone paging codes and associated loudspeaker zones using the Terminal OPA control system.

    a. If security codes are required, identify and document the setup and steps to gain access to the phone paging functions.

    b. Verify the PBX paging code loudspeaker zones with physical testing.

K. UPS Systems

1. Identify and document existing UPS systems connected to the OPA. Conduct testing of UPS system backup and document the results of the test.

L. Summary Reports

1. Provide a report for each terminal and the work areas with the following content:

    a. Present the format that is planned for the existing system survey report.
    b. Details of survey methodology and test equipment
    c. General observations of OPA infrastructure and OPA output conditions
    d. Quantities of OPA equipment and locations
    e. Strategies for OPA expansion, including, but not limited to:
        i. New loudspeakers in work areas
        ii. New OPA head-end closet locations
        iii. OPA communication for both control and audio transmission between head-end rooms.
    f. Drawings showing locations of loudspeakers, loudspeaker circuits, and zones within terminal
    g. Drawings showing general locations of ambient noise sensing devices within terminal
    h. Recommendations for OPA head-end replacement design based on existing OPA evaluation.
    i. Present the OPA evaluation to the Owner and Owner's Representative at 5 meetings (one meeting per terminal and one for a summary of work areas) to provide overview of evaluation findings and additional information required.
    j. Issue a proposed schedule of values which will be a revised version, based upon the detailed evaluation of the existing systems, of the schedule of values included as Exhibit 1.
    k. Proposed detail schedule for the survey. Separate areas within Terminals and work areas.

M. Revised Schedule of Values and Approach

1. Following the presentation of the OPA evaluation to the Owner and Owner's representative, incorporate their comments and issue a final revised schedule of compensation.

a. The final revised schedule of compensation will include updated equipment and costs for:

    i. Replacement of OPA head-end equipment in Terminals.
    ii. Replacement of other associated Terminal OPA equipment as required to provide a fully functional system.

ATTACHMENT 3: PROJECT EXECUTION

I. PROJECT MANAGEMENT

The Vendor must:

- Assign a qualified Project Manager
- Develop and submit a detailed Critical Path Method ("CPM") project schedule
- Submit a detailed Project Management Plan

A. Project Manager

The Vendor must propose a qualified project manager (the "Project Manager") to serve as and be empowered to act as its representative in providing both off and on-site project management services throughout the term of the contract. The Vendor must provide written evidence of the Project Manager's qualifications and the appointment of the Project Manager is subject to the CDA's approval. The CDA shall grant or deny such approval in writing within a reasonable period of time. Should the CDA withhold approval of the proposed Project Manager, the Vendor must propose an alternate candidate within five (5) business days of the date of the notification stating the CDA's denial of approval for the proposed Project Manager.

The Project Manager must be on-site during all major installation activities. The Vendor may assign a suitably-qualified installation manager to fulfill this requirement. If the Vendor requests to permanently change the Project Manager, this request must be submitted in writing for review and approval by the CDA. The CDA reserves the right to require a change in Vendor Project Managers should the CDA determine that the Vendor's Project Manager has failed to be effective, responsive, or cooperative.

The term project management must include, but is not limited to, oversight (monitoring and control) of all OPA design, development, testing, installation activities conducted by the Vendor, and it's sub-contractors, coordinating with the CDA (and its agents, contractors, consultants and concessionaires) on all project-related matters, and coordinating with other contractors working on projects located in adjacent or co-located work areas.

The Project Manager must also be responsible for conducting project meetings and preparing progress reports. At a minimum the following meetings/reports must be supported:

- Bi-Weekly Status Meeting (during design and development)
- Weekly Status Meetings (during any onsite work)
- Monthly Status Report
- Preliminary Design Review Meeting (to be held on-site)
- System Design Document Review (to be held on-site)

The Project Manager must provide written minutes of such meetings, providing reports concerning significant events and all work completed or a percentage completed since the previous meeting and work to be conducted before the next meeting, as well as, providing phasing, scheduling, and System installation documentation or information (in written, graphical or oral format) as requested by the CDA and detailed in these specifications.

The Project Manager must also be responsible for ensuring all deliverables required in these specifications are true and correct, delivered in a timely manner and updated as required by the CDA.

B. Project Schedule

Within 15 days after Notice to Proceed, the Vendor must develop and submit a detailed Critical

Path Method ("CPM") project schedule (the "Project Schedule"). The project scheduled must be submitted and maintained using Primavera Project Planner Version P6 Schedule Analyzer.

The Project Schedule shall include, but is not limited to, an outline of the tasks that will be completed to satisfy all requirements contained in Attachment 3, as well as the names and responsibilities of all key participants involved in each task. The Project Schedule shall include completion dates for each task or subtask. Tasks having shared responsibilities that may be outside of the Vendor's direct control must be included in the Project Schedule. The CDA may assist the Vendor in obtaining the necessary information.

The Project Schedule must be organized by phase or sub-phase and must include milestones (action and date) for each phase of work. If the Vendor requests to implement phases or sub-phases concurrently, the Vendor must provide for separate tracking for the multiple tasks in process.

The Project Manager will be responsible for maintaining the Project Schedule on a monthly basis. An updated project schedule shall be submitted by the 10th of each month. Additionally, the Project Schedule shall be updated and submitted on a bi-weekly basis during the installation phase.

The Vendor shall inform the CDA of significant foreseeable changes to the Project Schedule at least two weeks before the expected event is to take place. Unforeseen conditions shall be reported immediately upon discovery. In the event of such a delay due to unforeseen circumstances the Project Manager will be responsible for identifying and proposing methods to mitigate the impact on the Project Schedule (or to expedite the Project Schedule) and for making appropriate changes to the Project Schedule, as approved by the CDA.

The Project Manager must also be responsible for communicating any Project Schedule changes (through channels or methods approved by the CDA) to all parties that may be impacted by the change.

The project schedule must indicate all planned system outages and must be shown by hour and day. Failure to complete phases as scheduled may result in financial penalties as described in the sample Professional services agreement.

The Vendor must provide overall operational completion dates for each project phase, sub-phase and or milestone. The Vendor's failure to meet the milestone dates for the individual Phases or Sub-phase completion dates shall invoke actual damages incurred as described in the sample professional services agreement.

The Project Schedule is an integral part of the Vendor's Project Management Plan (PMP), Attachment 3 Paragraph I.C., and must be consistent with, and properly coordinated with, other components of the PMP (Testing Plan, Transition Plan, etc.).

C. Project Management Plan (PMP)

Within 30 days of the date of the Vendor's Notice to Proceed Letter from the City, the Vendor must submit a detailed Project Management Plan (PMP), which shall describe the Vendor's Project team organization and reporting relationships, Key Project Staff, team member contact information, Project stakeholders, the Vendor's project delivery approach, communication plan, project risks, and the Vendor's procedures for managing and controlling the overall work.

The PMP must include, but not be limited to, the following components, as described below:

1. Project Organization

As part of the PMP, the Vendor must include a Project Organization Chart, a graphic representation of the Vendor's Project team organization and hierarchy that indicates functional areas of responsibility for the Key Project Staff.

2. Key Personnel

As part of the PMP, the Vendor must include a summary of individuals designated as Key Personnel. The CDA must review and provide the Vendor with written approval prior to the start of work by any individual listed as Key Personnel who was not included within the Vendor's Bid.

The Vendor must also submit a Key Personnel directory that includes the following information:

- Name
- Title (with respect to the Work)
- Office address
- E-mail address
- Office telephone numbers
- Fax number
- Mobile phone number

The directory must be updated throughout the course of the project. Key Personnel are the individuals from the Vendor's organization who are functionally responsible for each of the following roles:

- Project Manager
- Deputy Project Manager
- Software Design Manager
- Installation Manager
- Maintenance Manager
- Quality Assurance Manager

The Vendor shall be required to notify the CDA at least thirty (30) Calendar Days in advance of replacing any Key Personnel and must submit the names and Qualifications of the proposed replacement(s) to the CDA for written approval. The CDA shall be allowed to interview replacements, if the CDA so desires. The CDA has the right to reject, at its sole discretion, any proposed replacement.

3. Uniforms

The Vendor's employees are required to wear suitable uniforms while performing any Work, at a City facility, under this Scope.

The Vendor's employees must wear an identification badge at all times while performing any Work, at a City facility, under this Scope.

4. Project Delivery Approach

The Vendor must include language within the PMP describing the Vendor's approach to deliver a System that meets the functional, operational, and performance requirements.

5. System Transition Section

The system transition section of the System Design Document shall describe how the

impact on current public address system functions can be minimized during the System installation/transition period. The request project and installation phasing strategy should be presented in this section.

The system transition section shall include a description on how the Vendor plans to transition operation of the OPA from the existing configuration to the new configuration. It should clearly describe the expected role of the CDA in maintaining the highest level of customer service possible. As with all components of the PMP, it is subject to approval by the CDA after contract award and should be delivered with the PMP to the CDA who has the authority to direct the Vendor to make any appropriate changes. The Vendor is responsible for the content of the system transition section of the System Design Document. The details included in the system transition section should be used with other portions of the PMP and the Project Schedule.

6. Configuration Management Section

The configuration management section must identify, coordinate, control, and track the change and evolution in software versions or configurations of System or subsystem components or deliverables such as Hardware, Firmware, Software, networking, report formats and manuals.

At all times during design, development and installation the Vendor must ensure the configuration management section is accurate and current. At any time during the installation the CDA may request that the Project Manager conduct a comprehensive review of its components and revalidate its accuracy. The Vendor's responsibility to update the configuration management section shall continue until the completion of the initial warranty period.

7. Master Test Plan

As part of the PMP, the Vendor must initially provide a comprehensive Master Test Plan (MTP) that provides a comprehensive description on how the OPA components and overall System must be tested for compliance with the technical specifications. The MTP must comply with the general guidelines set forth in Exhibit 1-Attachment 4-Part 3-Paragraphs IV and V and must be designed to test all the functionalities provided for in these paragraphs.

The MTP must initially include a description of testing philosophy, procedures and documents to be used.

The MTP is expected to be a living document with updates to the various sections and testing phases as the project progresses.

The MTP must have separate sub-sections for testing during each phase and or sub-phase including but not limited to:

- Subsystem Testing (as needed)
- System Acceptance Testing
- Extended Operations Testing

Each sub-section may include appropriate testing goals, descriptive narratives, test scripts and checklists that conform to the requirements of these technical specifications. Each sub-section segment must also include graphics (tables, charts, etc.) that will allow the CDA to easily correlate the testing to individual functionalities.

The MTP shall be maintained and modified as requested by the CDA. Copies of all applicable testing documentation shall be later added to the project plan so it may serve as a single resource for all testing documentation.

8. Quality Assurance Plan

The Vendor must also submit as part of the PMP a documented quality assurance plan (the "Quality Assurance Plan"), detailing System procedures, processes and materials. The Quality Assurance Plan must include a listing of each task and a reference of procedures with summary descriptions to assure that all work affecting quality (including engineering, programming, purchasing, handling, machining, assembling, processing, inspecting, testing, modifying, installing and any other treatment of product, facilities, standards, or equipment) is prescribed in a clear and complete document of a type acceptable to the CDA.

The plan shall ensure that the Vendor has established and will maintain an effective quality assurance program (the "Quality Assurance Program"). The Quality Assurance Program must include, but not be limited to, the following:

- Assure quality throughout all areas of performance
- Assure that all requirements set forth herein are validated through all stages of this project
- Identify and eliminate items that cannot meet approved standards and specifications

The Vendor must be responsible for assuring that all supplies, components, systems, subsystems and services procured from subcontractors and vendors conform to the requirements set forth herein and in the contract entered into between the Vendor and the City. The quality assurance requirements for the Vendor apply to all subcontractors and vendors used by the Vendor.

II. SYSTEM DESIGN REQUIREMENTS

The following design considerations must be adhered to during all development and design phases of the OPA:

- Parts and components of the OPA must be new and approved by the manufacturer
- Written request must be submitted to CDA for substituted parts and equipment

A. New Equipment

Unless otherwise stated, all components, parts, interconnecting cable and other items used in the OPA must be new and unused. All components and parts must be of the latest, proven state-of-the-art electronic design, used in prior OPA or comparable applications, wherever possible. All major parts, subassemblies and materials must be available from "second source" suppliers. Any exceptions to the above requirements must be explicitly identified as such in the Vendor's bid, and Vendor should provide an inventory of these materials.

A list or initial Bill of Materials (BOM) shall be provided as part of the Vendor's proposal including part name, model/serial number, manufacturer and qty. It will be required that a final BOM be provided upon issuance of Final System Acceptance.

B. Quality of Materials

All parts, equipment, and materials being used throughout the OPA must be industrial grade, durable with demonstrated reliability and must be incorporated into OPA in such a manner so as to produce a completed product which is acceptable and properly functional in every detail, in accordance with these technical specifications.

C. Inspection of Materials

All parts, equipment and materials must be subject to inspection by the CDA at reasonable times and places.

The inspection of parts, equipment, or materials at the manufacturer's plant by the CDA may be conducted after a one-week notice period. Any such interim inspection must not be construed as final acceptance of any equipment, design, component, subsystem or OPA. The CDA reserves the right to reject any products, parts, equipment or materials which do not meet the requirements of these technical specifications up to the time of written Final System Acceptance, regardless of prior inspections or tests.

D. Defectiveness and Non-Conformity

In the event that the CDA finds parts, equipment, and materials which are not in full compliance with these technical specifications, the Vendor must promptly remove such equipment and replace it with equipment which meets the functional requirements in these technical specifications, at the Vendor's expense.

E. Substitution of Parts

If the Vendor chooses to substitute parts or equipment of a type different from that identified in the Bid, a written request must be submitted to the CDA for approval. Written approval of the substitution of parts or equipment must be obtained from the CDA before procurement is initiated. In order for the CDA to evaluate the requested parts and equipment substitution, full and complete technical documentation and price information must be clearly specified for the parts or equipment requested as a substitute. The Vendor will be held responsible for the performance of the parts and/or equipment even if the substitution has been approved by the CDA.

F. Proprietary Items

Proprietary items will be considered for acceptance by the CDA only under the following conditions:

- The Vendor guarantees to make the spare parts and support available to the CDA at a price similar to the contract price for the useful life of the OPA
- In the event that the Vendor exits the United States market, the Vendor must immediately relinquish all proprietary rights to the OPA equipment and Subsystems and provide to the CDA all drawings and other documentation necessary for the CDA to procure parts and/or support from other sources.

III. PRELIMINARY DESIGN REVIEW

Within one hundred and eighty (180) days of the date of the Vendor's Notice to Proceed Letter, the Vendor must conduct a Preliminary Design Review (PDR) of the proposed OPA. The PDR must be a formal presentation to be conducted in the form of a workshop over a one (1) to two (2) day period on-site within the CDA offices. A formal submittal of a PDR document is not required; however, the PDR should be supported by an electronic slide presentation with appropriate hard-copy handouts. An advance copy must be provided five (5) business days prior to the formal presentation for review. (Microsoft PowerPoint is the usual format used by the City for electronic slide presentations.)

Sections and or topics for the PDR must include, but must not necessarily be limited to, the following:

- Team Organization
- OPA Concept and Methodology
- OPA Program Schedule

- Results of Stakeholders Interviews and Consensus Agreements Reached
- Results of the detailed field survey of the entire existing PA System
- Overall System Architecture
- Requirements for each System or sub-system
- Installation Overview, including but limited to:

    - Vendor identified modifications to existing system components
    - Data communications and power requirements
    - Requirements to access other areas or facilities to complete necessary work
    - Computer and networking requirements and coordination with CDA's staff
    - Relevant product cut-sheets not provided with the Vendor's Proposal
    - Temporary power arrangements if required
    - Outage notification plans and programs

- Assess design issues and associated risk
- Risk Mitigation.

In addition, the Vendor must address and show compliance with quality assurance, reliability, and maintainability requirements, software development and other System requirements.

Hardware concept drawings and preliminary level engineering specifications must be submitted during this review.

The Vendor must summarize its input along with any related CDA comments and provide a written document memorializing the meeting.

IV. SYSTEM DESIGN DOCUMENT

Following the PDR, the Vendor must provide a System Design Document(Final Design) consisting of software design, hardware design, Systems Requirement Compliance Matrix, Bill of Materials, and Systems Engineering Process Documentation.

Prior to submitting the draft System Design Document, the Vendor must first prepare a detailed document outline. The System Design Document outline must include sub-levels of detail and a brief description of the information included in each section. At the CDA's discretion, the Vendor and the CDA must meet to discuss the CDA's comments on the System Design Document outline and revise the outline accordingly to meet the CDA's requirements for detail. The detailed outline must be submitted to the CDA for review and approval.

The System Design Document (SDD) must include a description of the System and its constraints, as well as the conceptual design for the overall System and subsystems including software, hardware, equipment, and communications.

The Vendor must provide a functional narrative of the System and subsystem block diagrams, data flow diagrams, data structure diagrams, schematics, report layouts, graphic user interfaces, and any other graphic illustrations to demonstrate the technical adequacy of the System design approach and compliance for System Hardware and Software with quality assurance, reliability, maintainability, software development, and other requirements set forth these technical specifications.

The SDD must include at least the following information:

- Description of the System and constraints;
- Functional Specifications for the System and the sub-systems;
- Discussion of any design variants and selection of design;
- Block diagrams for the System and sub-systems;
- Descriptions of the System and sub-systems;

- Listing of reports;
- Representation of Auditability;
- User task flow;
- User interfaces;
- Interfaces for all Host modules;
- Interfaces to any external sources;
- Hardware and equipment design;
- Redundancy;
- Communication network design; and
- Assessment of risks and risk mitigation strategies.

The Vendor is responsible for ensuring that the System Design Document includes the level of technical detail necessary to enable the developers to code and build a System that meets the specifications set forth herein. The Vendor must also be familiar with the submittal requirements detailed in Exhibit 1-Attachment 4-Part 1-Paragraph V- Shop Drawings Submittals.

The Vendor must deliver three (3) versions of the SDD including a Draft, Final, and As-Built. The Vendor must ensure that all submitted documents have been subject to internal editorial review and are professionally presented and substantially free of grammatical, formatting and content errors. An abundance of such errors may result in the CDA's rejection of the submittal. The Vendor must formally submit each version of the System Design Document to the CDA, interim, electronic, or piecemeal submittals will not be accepted.

The CDA will review and comment on each System Design Document submittal within the time frame set in these technical specifications. The Vendor is required to respond to each comment, either to state what System changes will be made or to state that no changes will be made. If no changes are to be made, the Vendor shall state the reason for this decision.

The CDA may choose to reject, in whole or in part, a document submittal if it is noncompliant with the CDA's requirements. Rejection of a submittal by the CDA does not release the Vendor from its duty to respond to the CDA's comments.

Comment resolution meetings will be held with the CDA and the Vendor to review the draft and draft final System Design Document. The Vendor may not resubmit the document until the comment resolution meeting has been held.

The System Design Document will be used as the baseline document to determine if the System meets the technical specifications and related contract documents.

V. INSTALLATION AND TESTING

With the written issuance of approval of Phase 1 by the CDA, the Vendor may be authorized to immediately commence shipment of the OPA equipment to the site to begin the installation phase. (Phase II—See this attachment—paragraph XII)

No actual equipment installation activity will be allowed to take place on site until approval of Phase 1 has been obtained. However, if any conduit or cable installation or other minor physical modifications are required, these may be performed prior to approval of Phase 1. Any installation activity prior to Phase 1 approval must be approved, in writing, by the CDA.

Installation of the OPA equipment must be performed by trained personnel who are familiar with all aspects of the OPA.

During the installation phase of the project, the Vendor must provide a full time on-site Project Manager and or Installation Manager conveniently located and accessible to the CDA. During phases other than the installation phases, the Vendor's Project Manager must be readily accessible via

telephone and/or pager. In addition, the Vendor's Project Manager must report to the site within 24 hour notification from the CDA.

In the event that any structure is damaged or loss of OPA functionality (including existing OPA) occurs due to the Vendor's activities, such damage must be repaired immediately at the Vendor's expense and to the satisfaction of the CDA. Such damage or loss of functionality may also be cause for damage assessment as described in the sample professional services agreement.

The Vendor must make its own arrangements for power, water, portable toilets, and waste at the work site.

VI. CDA DESIGN AND CONSTRUCTION STANDARDS

Vendor must ensure that all projects are in compliance with all local, state, and federal requirements and codes. In addition, the Vendor must design each component of the project in accordance with the CDA's Design and Construction Standards. The CDA's Design and Construction Standards manual is available for review at the CDA offices at 10510 W. Zemke, Chicago, Illinois 60666.

VII. SAFETY

The Vendor is solely responsible with providing a safe work environment for its employees, agents and subcontractors. Any hazards or unsafe practices the Vendor may identify that it is unable to correct or are outside the Vendor's scope of responsibility must be promptly reported to the CDA. The Vendor must have in place appropriate safety plans, programs and procedures to ensure job safety and also comply with the Airport Safety Manual. The Vendor must ensure that all workers assigned to this project whether employed directly or indirectly by the Vendor or its subcontractors are protected in accordance with all applicable local, state and federal workplace and occupational safety regulations. The Vendor must also refrain from creating work hazards for others individuals legally authorized to be within or in proximity to the Vendor's work areas.

VIII. INCIDENTAL ELECTRICAL AND CONSTRUCTION WORK

The Vendor will be required to complete certain electrical and civil work in addition to those construction tasks directly related to an OPA installation. Details of the additional Vendor-provided construction activity must be specified in the appropriate vendor-provided deliverable document. This deliverable must describe and detail the electrical and civil modifications to be done to the Airport's existing infrastructure to include but not limited to, concrete work on islands and drive lanes, cabling and conduit installation for antenna installations and any modifications that may be required.

IX. VENDOR PARKING

The CDA must provide the Vendor with parking for up to ten (10) Vendor or subcontractor vehicles. The CDA must also provide access to delivery vehicles when equipment, consumables, construction waste or other cargo is delivered to or removed from any portion of the controlled work site.

X. VENDOR EQUIPMENT STORAGE AND WORK AREA

The Vendor will be provided with adequate space for equipment and materials storage required for normal installation activities. The Vendor will coordinate with the Skilled Trades Group of the CDA and the CDA will work with the Vendor to determine the best location on Airport property for storage and work location during installation activities. Proximity to the installation shall be a factor in determining the Vendor Equipment Storage and Work Areas.

XI. SECURITY

The Vendor is solely responsible for the security of all equipment components, tools and other property it or its subcontractor chooses to bring on to Airport property. Until a phase of work is deemed to be substantially complete as documented in the appropriate completed vendor-provided checklist, the Vendor is also responsible for installed components of the OPA.

The Vendor is solely responsible for the physical security of its employees, agents and subcontractors engaged in work on Airport property as a consequence of this project.

At this time the CDA does require work within the Airport's sterile or secure areas. The Vendor will be required to comply with the CDA's security program and should be prepared to respond to such a request**. Badging of all the Vendor's or sub-contractor's personnel will be required within the sterile and secured areas of the airport.** Events beyond the CDA's control such as heightened security levels may require additional security measures that could impact the course of the project. Compliance with these additional security measures will be the responsibility of the Vendor.

XII. PROJECT PHASES

The OPA must be completed by the Vendor in four distinct phases. These phases include:

Phase I - Design, Development - This phase includes the detailed field investigation, design, development, fabrication and pretest of components of the entire OPA up to and including successful conduct of a full and detailed test of all OPA equipment, subsystems or modules in accordance with a preapproved Test Plan. This test must be performed by the Vendor under the supervision of the CDA;

Phase II - Installation, Testing and Approval - Field equipment installation, including on-site Vendor testing and debugging, conduct of a full and detailed System Acceptance Test culminating in Final System Approval for use of the complete system with all components integrated for OPA operation;

Phase III - Performance Evaluation and Acceptance - Performance evaluation period of ninety (90) days under actual operation during which time a full and detailed Extended Operations Test (EOT) will be conducted. Any outstanding problems must be corrected by the Vendor. This phase also includes full system as-built documentation, operating and maintenance manual, warranty support and maintenance by the Vendor, culminating in Final System Acceptance; and

Phase IV - Warranty Period - Provision of full maintenance and system support by the Vendor during a Warranty Period extending twelve months after issuance of Final System Acceptance. During this phase the Vendor must correct any outstanding problems.

Phase V - Extended Warranty Period – Following the acceptance of the OPA and completion of the initial warranty period, the vendor will be responsible for maintaining the OPA for a period of 108 months, at the discretion of the CDA.

The following completion deadlines are required for each major phase of the work:

Table 2 – Project Phase Completion Schedule

PROJECT PHASE	**COMPLETION DURATION:**
Phase I Phase 1A – Detailed field study & documentation	4 Months from NTP
Phase 1B – Design development – preliminary design review	2 Months after CDA approval of Phase 1A

Phase 1C-Final Design(System Design Document)	2 Months after CDA approval of Phase 1B
Phase 1D – Shop drawing submittal	1 Month after CDA approval of Phase 1C
Phase II – Installation, testing, and approval	9 Months after CDA approval of Phase 1C
Phase III – Performance evaluation, final system acceptance as-built documents and O & M	3 Months after CDA approval of Phase II
Phase IV – Warranty Period	12 Months after CDA approval of Phase III
Phase V – Extended Warranty Period	108 months after completion of Phase IV

The OPA must be ready for full use and service no later than the date as dictated by completion of the Phase II Milestone. If problems are detected during the data analysis and performance evaluation period, and the equipment is not operating at an acceptable level of performance as defined herein, the Vendor shall be notified in writing immediately. Problems or defects must be promptly resolved by the Vendor. Final System Approval and or Acceptance will not be granted by the CDA until the OPA performs satisfactorily. The Vendor will be responsible for preparing a detailed schedule based upon tables including the required CDA approval periods.

A. Phases 1A, 1B, 1C, 1D

Upon Notice to Proceed (NTP) issued by the CDA, a project kick off meeting will be held within fifteen (15) days of the NTP. At this meeting, all appropriate lines of communication for both oral and written correspondence shall be established. Appropriate methods for documenting meetings, telephone conversations and other communications shall also be defined.

A plan for civil works including detailed description of any required parking lot modifications must be submitted to the CDA within the time period specified in Table 2, “Project Phase Completion Schedule.”

Work during this phase must include all field evaluation and documentation of existing systems, new system design development, software development, and shop drawing submittals fabrication, shop testing, software testing, and software documentation. Periodically throughout this Phase, CDA representatives may visit the Vendor’s facility in order to inspect work in progress and may occasionally request reasonable progress printings of the OPA system design. The CDA will give reasonable advance notice prior to visits.

The Vendor must provide a detailed phase installation schedule for the review and approval of the CDA no later than 45 days prior to the beginning of installation. The Vendor must provide written results and evidence of their own testing. If the proposed test scripts have been approved and, if after reviewing the evidence of the Vendor’s internal testing of the OPA the CDA agrees that the Vendor has sufficiently tested at the factory level, installation can begin.

Approval of the Vendor test in no way reduces or eliminates the Vendor’s full responsibility to resolve any problems and make the OPA work in full conformance with the requirements of these technical specifications. Nor does it limit the rights of the CDA to bring problems to the attention of the Vendor at a later time.

B. Phase II – Installation, Testing and Approval

With the issuance of installation approval by the CDA, the Vendor may be authorized to immediately begin Phase II. No actual equipment installation activity must take place on site until Vendor testing approval has been obtained. However, if any conduit installation or other minor

physical modifications to the work areas are required, these may be performed prior to approval from the CDA for installation. Any pre-installation activity must be approved, in writing, by the CDA.

Plans for civil works must be submitted to the CDA for review and approval. Actual installation will be inspected by, and subject to the approval of the CDA.

Installation of the OPA equipment must be performed by trained personnel who are familiar with all aspects of the OPA. During the installation phase of the project, the Vendor must provide a full time on-site Project Manager and or Installation Manager conveniently located and accessible to the CDA. During phases other than the installation phases, the Project Manager must be readily accessible via telephone and/or pager. In addition, the Project Manager must report to the site within 24 hour notification from the CDA.

In the event that any structure is damaged due to the Vendor's activities, such damage must be repaired immediately at the Vendor's expense and to the satisfaction of the CDA.

The Vendor must make his/her own arrangement for power, water and waste at the work site.

The Vendor, under the supervision of the CDA, must perform System Acceptance Testing (SAT) (as defined in Exhibit 1-Attachment 2-Part 3- Paragraphs IV and V. SAT is testing performed at the time of system installation. This SAT shall include Head-End equipment, and any other reasonable test that may be required to verify full end-to-end functioning of the OPA in a controlled testing environment.

If, in the judgment of the CDA, the SAT indicates that the OPA hardware and software appear to be functioning satisfactorily in accordance with a predefined test plan and all technical performance requirements are satisfied, the CDA will issue written approval of the SAT.

Approval of the SAT in no way reduces or eliminates the Vendor's full responsibility to resolve any problems and make the OPA work in full conformance with the requirements of these technical specifications. Nor does it limit the rights of the CDA to bring problems to the attention of the Vendor at a later time.

The conclusion of Phase II shall be signified by the completion of installation and testing of the new OPA equipment and the completion of site verification and submission and approval of a SAT report.

C. Phase III – Performance Evaluation, Final System Acceptance and As-Built Documentation

Phase III will begin after the conclusion of Phase II. During Phase III, a three-month period (defined as 90 days) of observation and evaluation of the new OPA under actual use must take place and the Vendor must perform the Extended Operational Test (EOT). The Vendor is required to fully support and maintain the OPA during this Phase. Any problems detected during the monitoring of the OPA during Phase III shall be immediately brought to the attention of the Vendor for resolution. At the conclusion of this evaluation period, if the System is considered to be operating fully in compliance with the requirements set forth herein and in the contract entered in to between the Vendor and the City, the CDA shall provide the Vendor with written notice of Final System Approval.

Starting at the beginning of Phase II and continuing through the end of Phase III, the Vendor must provide a full time manager on-site to advise and assist the CDA in start-up and initial operation of the OPA.

The Vendor, under the supervision of the CDA, must perform the Extended Operations Test. This testing shall include system and subsystem availability, as well as any other reasonable test that may be required to verify full end-to-end functioning of the OPA under live operating conditions.

If, in the judgment of the CDA, the Extended Operations Test indicates that the OPA hardware and software appear to be functioning satisfactorily in accordance with a predefined test plan and

all technical performance requirements are satisfied, the CDA shall issue written approval of the Extended Operations Test.

This Approval of the Extended Operations Test shall in no way reduce or eliminate the Vendor's full responsibility to resolve any problems and make the OPA work in full conformance with the requirements of this Contract. Nor shall it limit the rights of the CDA to bring problems to the attention of the Vendor at a later time.

Approval of the Extended Operations Test shall indicate Final System Acceptance and the beginning of the Phase IV Warranty Period.

Additionally, as a condition of Final System Acceptance As-Built Documentation must be completed and submitted for review and approval.

The Vendor must provide two (2) complete sets of prints of As-Built drawings for the OPA. The As-Built drawings shall be provided electronically in CAD and PDF format as well as hard copies. The set shall include, but not be limited to, all schematics, logic diagrams, layouts, wiring diagrams, detail drawings etc., designed or modified for the OPA, including installation details so as to provide a complete record of the As-Built status of the OPA.

Drawings contained in standard catalogues and manuals for unmodified commercial products do not have to be reproduced as part of the As-Built drawing set. All revisions to standard commercial assemblies or components of the toll system shall be included in the As-Built drawings.

The set of As-Built drawings shall consist of a title sheet, an index sheet and the various As-Built drawings. The index sheets shall include a listing of all drawings with headings for Drawing Number, Drawing Title, and the type of drawing, such as assembly, schematic, material list, wiring diagram, wire list, or similar categories.

D. Phase IV – Warranty Period

The final phase of this Contract, Phase IV includes continued OPA maintenance through a twelve month Warranty Period at no additional cost to the City. The Warranty Period commences with the granting of Final System Acceptance.

All provisions, as set forth in maintenance provisions of these specifications shall be in effect throughout the Warranty Period. During this period, the Vendor must supply adequate maintenance personnel to meet response requirements as set forth in the sample professional services agreement, spare parts and factory support to ensure the system remains fully operational in accordance with system performance requirements and problems are corrected within the repair/replacement times indicated.

E. Phase V- Extended Warranty Period

See Attachment 3-Paragraph XX for requirements.

XIII. ADDITIONAL SUPPORTING DOCUMENTATION

The CDA has additional documentation describing systems and equipment that are peripheral to this project. These documents contain elements related to Airport security and are considered secure in nature. As a result, these documents will be provided to the Vendor only after selection. An example of this type of documentation would be relating to the CDA badging system. The Vendor should assume that all CDA equipment and systems are non-proprietary and open. The Vendor should prepare their cost analysis based on this assumption.

Each submittal must be submitted in both electronic copy and printed copy. Printed copies shall be submitted in duplicate unless otherwise noted in these specifications.

XIV. EQUIPMENT DELIVERY AND STORAGE

The Vendor must not ship and/or deliver any OPA components without the prior written approval of the CDA. The CDA, at its sole discretion, may require the Vendor to demonstrate the efficacy of the proposed System by means of a limited factory test. This test must be conducted in accordance with the testing requirements and performance standards contained in these technical specifications. Neither the CDA nor its agent(s) will accept delivery of any System components until such time as the particular component has been finally accepted in accordance with the provisions of the appropriate section below. The Vendor is solely responsible for the care, custody and control of all System components, installed or otherwise, until such time as substantial completion for each phase has been achieved.

The Vendor is responsible for securing long-term storage unless the CDA determines it is the best interest of the CDA to provide such storage. For those items that must be installed immediately upon delivery, shipment directly to the Airport work site is acceptable but all other equipment must be delivered to the authorized storage site. Equipment or materials not actively being installed may not be housed at the Airport for extended periods. The Vendor shall coordinate with the CDA an acceptable arrangement for short-term storage of items at the CDA. The CDA will make reasonable efforts to provide suitable temporary storage, staging, or climate controlled space that may be reasonably required, for the System components required by these specifications and the Vendor's System Design Documentation.

XV. REMOVAL AND DISPOSAL OF EXISTING EQUIPMENT & COMPONENTS

A. Removal

The Vendor is responsible for removal of all existing OPA field devices and subsystem components that are uninstalled and no longer used for the operation of the existing public address system. Unless otherwise directed by the CDA, the Vendor shall also remove any temporary equipment installations and ancillary installed elements (signs, barricades, etc.) that may be required for safety, security or Patron information, in order to comply with the provisions of these specifications and the Vendor's system design.

The Vendor is responsible for providing all required documentation regarding the disposal of equipment that is marked as CDA assets.

The CDA will provide final guidance on items (such as unused speaker cabling) that may be abandoned in place. All areas where items have been removed must be restored to their original condition (by way of patching, painting, or other measures) or to a condition suitable for safe use by the public and befitting the appearance standards of the CDA. The CDA will provide additional guidance and shall be the final authority on the acceptance of such restoration actions.

B. Disposal

The Vendor shall dispose of all removed OPA field devices or Subsystem components in a manner that conforms to applicable federal, state, or local law, regulations, ordinances and guidelines concerning safety, the environment or other such applicable provisions. No disposal actions shall be taken without the prior notification (at least three (3) business days prior) of the CDA.

The Vendor is responsible for identifying, clearly marking and otherwise render safe any hazardous materials that may require special disposal procedures. Should off-site disposal of hazardous materials be required, the Vendor must propose the appropriate method of disposal for review by CDA, as well as, other officials. The CDA, in coordination with appropriate agencies, shall make a final determination and shall instruct the Vendor the manner of disposal. Such specialized disposal procedures shall be deemed additional work and the CDA shall make the final determination on whether the item or items are disposed by the Vendor, or by another party.

During the transition period and while the existing System is still operational the Vendor must ensure that any removal or disposal actions recommended or taken do not adversely impact the proper operation of the existing System.

XVI. INSTALLATION REQUIREMENTS

All components installed in exterior locations must be contained in housings appropriate for operation in environmental conditions common in the area of the Airport. Environmentally sensitive electronic equipment, such as System servers, designed to operate in conditioned spaces must be placed in appropriate facilities provided by the CDA.

The Vendor is responsible for any additional conditioned areas other than those provided by the CDA and is responsible for any environmental control measures that may be required within individual device housing (heaters, thermostats, air conditioners, dehumidifiers, etc.).

The Vendor is solely responsible for the security of all equipment installed or stored on Airport property during the installation, configuration, testing and warranty periods. The Vendor must replace all equipment, at no additional cost to the CDA that has been deemed by the CDA to be damaged by Vendor's improper handling or any other cause by the Vendor. The Vendor may propose remedial action for minor damage (such as paint scratches or chips) to the external appearance (having no effect on functionality) and the CDA may approve such action if deemed appropriate. In all cases, any remedial or reconditioning actions taken must bring the equipment or component back to a condition suitable for new, first quality equipment.

All cabling installations between System devices must conform to the manufacturers' recommendations, these technical specifications and the appropriate CDA standard for the given cable type (fiber optic or copper). Appropriate conduit and any other raceway components must also be provided by the Vendor for each cable run. The Vendor shall conduct any required cable certification testing and submit test reports to the CDA in an appropriate format. The type of cable or wire used must depend on the total linear distance of the cable or wire run based on CDA standards.

A. Equipment Mounting

All equipment must be mounted by the Vendor in a safe and effective manner within appropriate housings or protective coverings as described in the Vendor's System Design Document deliverable to be approved by the CDA. The housing or protective devices must be secured in a manner that conforms to applicable code requirements, industry best practices and CDA standards. All device or component housings, junction boxes, pull boxes and cabling cabinets must include locking doors designed to protect the device or cabling from the elements, tampering or other damage. Protective devices such as bulwarks or bollards must be placed in a manner that does not impede proper access to device components.

Cables and wiring must be neatly dressed with appropriate service loops inside the device housing or cabling enclosure in manner that allows easy recognition of component markings, does not impede the function of components or unduly restrict airflow within the housing or cabinet. Where multiple components are contained within the same housing or cabinet the Vendor must provide shelving or preferably sliding trays to ensure proper access to the components. To the extent possible, all housing and cabinets for similar devices or components must be configured, cabled and identified in an identical standardized manner.

All communications data and electrical power connections must conform to the appropriate national, professional, local and CDA standards or codes. All device connections including, but not limited to, mechanical, electrical and communication must be uniform throughout the OPA. All connections must be labeled with nomenclature identical to that provided with the Vendor's System Design Documentation and in compliance with CDA standards. Surge and lighting protection must also be provided by the Vendor for all sensitive systems, components and/or devices in compliance with CDA standards.

B. Equipment and Cabling Identification

All cabling, components, and cabinets must be permanently identified in a manner that allows for easy recognition and servicing. All equipment and cabling must meet the requirements set forth in the current Cabling Standards Exhibit 1-Attachment 2-Part 1-Paragraph IV.D and Attachment 2-Part 3-Paragraph II.E. The identification scheme must conform to the CDA's standards and each device or component must be marked with a unique serial and or part number that correlates to the maintenance documentation provided by the Vendor.

Markings must be permanent and easily legible with the unaided eye from a distance appropriate for the installation, inspection or servicing activities. Markings must not deteriorate with age, exposure to light, or from normal handling by maintenance personnel. The markings on the cables, switches, panels, termination blocks and connectors must conform to the appropriate CDA standard for the particular cable type or transmission requirement. In all cases safety is paramount and the Vendor is responsible for identifying and recommending to the CDA any deviation from the appropriate standards that would enhance the safety of individuals or property both during and after installation.

XVII. SYSTEM TESTING

The Vendor must submit a Master Test Plan (the "Master Test Plan") as part of its PMP for approval by the CDA, in accordance with the deliverables guidelines contained in these technical specifications. The Master Test Plan must demonstrate the methods that must be employed to verify that all hardware, software, firmware components and associated documentation are installed or delivered in accordance with the requirements of these specifications and the instructions of the CDA.

The Master Test Plan must include detailed test descriptions for each type of test to be conducted in during each phase of the project. Such narrative descriptions must include appropriate cross-references to these specifications that allows the CDA to readily verify the functional requirement being tested.

The Vendor must include in the test descriptions specific outlines enumerating the OPA functionality being tested each testing process, all testing assumptions, any limiting factors and their impact on test validity and the expected results for each of the controlled testing procedures in the System Acceptance Test. The Vendor shall propose testing schedules and locations for approval by the CDA. Test results shall be documented on the appropriate approved, vendor-provided test scripts.

These checklists must be facility-specific (where appropriate) and must be based on the sample checklists provided as part of the procurement package. The tests must be conducted by the Vendor and witnessed by CDA representatives and other parties, as the CDA may deem appropriate.

In some cases testing may be conducted during the transition between the current OPA and the new OPA. The Vendor must consider the operational impacts associated with this testing method and properly communicate these to the CDA. Testing shall not disrupt the normal operation of the OPA. The description of the testing during the transition must also be provided by the Vendor in the Master Test Plan.

A. Test Procedures

The Vendor must provide detailed test scripts for each testing procedure to the CDA a minimum of 30 days prior to the start of formal, functional testing. No test must be started without an approved test procedure. The CDA requires at least five (5) business days to review any submitted test procedures and supporting test scripts. Where corrections are necessary, they must be made within five business days and resubmitted to the CDA for approval. A five-business-day review time shall also be allocated for review of corrections to any test procedure.

Per the submittal schedule above, the Master Test Plan must be updated with a submittal by the Vendor to include the individual test scripts that must be used during the various phases of testing including, but not limited to, the System Acceptance Testing and the Extended Operations Test for all of the components of the System.

The Vendor must, at a minimum, include in the test procedures, the required test participants or witnesses, the expected durations of the tests, a list of required testing materials to be provided either by the Vendor or the CDA, and a complete description of what constitutes successful completion of each discreet testing task and the overall test.

The Vendor must review all formal test procedures immediately after testing and certify that the test procedures adequately demonstrate all functional requirements of these specifications and to ensure a direct correlation exists between the conducted test, the test results, and specification requirements. The Vendor shall provide a checklist or other approved graphic representation, as part of the Master Test Plan, listing each OPA requirement and showing the specific tests and the methods used to demonstrate compliance with said requirement. The signed and completed checklist or other approved document be delivered to the CDA for review and approval. Approval by the CDA shall be documented by the appropriate CDA representatives initials signifying completion of a given task or subtask and by his or her signature on the completed vendor-provided checklist.

B. System Acceptance Test

As the Vendor completes equipment installation it must perform System Acceptance Testing (SAT). The Vendor must perform tests under the supervision of the CDA in accordance with the approved test plan.

Additionally the SAT must also include certification and audit. Successful completion and approval of SAT must not be granted until the Vendor has demonstrated that the OPA, in its entirety is fully compliant with all standards and requirements.

Upon completion of the System Acceptance Test (as determined by the approved Vendor-submitted Testing Plan) the CDA shall review the test results and provide the Vendor written notification of the CDA's satisfaction with the results. Successful completion and approval of the SAT by the CDA will indicate approval to move to Extended Operations Test portion of the project.

C. Extended Operations Test

Following successful completion of all System Acceptance Testing, the Vendor must notify the CDA that the OPA has been prepared for the Extended Operations Test (EOT). This test must demonstrate, over a period of ninety (90) consecutive days, the successful performance of all aspects of the OPA. The extended operations test must encompass all equipment and Systems installed and operating under actual field conditions.

The EOT shall start on a date jointly agreed upon by the CDA and Vendor. The test shall continue until a ninety (90) day period has elapsed during which all of the performance criteria have been continuously met. Wherever possible the EOT start date should coincide with the beginning of the month so that monthly reporting functions contain complete data and hence can be more easily evaluated.

During the test, the continued availability of the OPA shall be demonstrated. Where a failure occurs that causes loss of data, instability of the System, and/or corruption of the transactional data or database, the Vendor must immediately correct the problem. If during the ninety (90) day period the System fails to meet any one of the specified performance criteria (as documented in the approved Vendor-provided Testing Plan and SDD), the test must be halted and the Vendor must take any required corrective actions. The Vendor must submit a report to the CDA detailing the root cause of the failure, the corrective actions taken, and further actions taken to avoid any reoccurrence of this type of failure.

When the CDA is satisfied with the Vendor's documentation and resolution of the failure event, the test must be restarted (at day one) or continued (at the last completed day). This determination to restart or continue the test shall be based on the nature of the failure and shall be made at the sole discretion of the CDA. The restart or continuation will occur on a date jointly agreed upon by the CDA and Vendor.

Testing must continue in a similar fashion until a ninety (90) day period of stable operation is achieved. Stability is defined as the proper functioning of the OPA with a failure having no impact on the continued System operation, nor integrity of data. The Vendor is solely responsible for any additional costs incurred as a result of retest or restart actions for whatever period of time is required until testing is successfully completed.

D. Testing Documentation

The Vendor is responsible for ensuring that all documentation including engineering drawings, manuals, test procedures, testing results, and operational procedures for the "as installed" and "as tested" System are correct and complete. All documentation shall be submitted both in written and electronic format and must include any associated warranty documents and operating manuals for all installed components.

The Vendor must apply rigorous quality control standards and processes to all documentation and provide documentation describing these standards and processes along with all submittals. At a minimum, the Vendor must document the name, title and signature of the individual conducting quality control reviews. All testing documentation must be maintained and presented to the CDA in a manner that is acceptable to the CDA and that allows the CDA to support the maintenance and future expansion of the System.

XVIII. REQUIRED TRAINING AND MANUALS

The Vendor must:

- Provide a comprehensive Training Plan
- Provide end user and system administrative training

A. Training Plan

The Vendor must provide a training plan that contains a comprehensive description on how training must be conducted, evaluated and documented by the Vendor (the "Training Plan"). The Vendor must provide all necessary training required for the proper operation, maintenance and control of all System functions. The Vendor must also describe how it will provide training on any third-party software it may choose to provide with the System. The Vendor must, at the Vendor's own expense, provide documentation describing its Training Plan so that the CDA may use the product for its future training needs. At a minimum, the Training Plan must include samples of training outlines or curricula (to include class content and contact hours), recommended initial or recurring training requirements for each position listed in the specifications, samples of training documents or presentations, evidence of correlation between the training curricula and required manuals, and qualifications of proposed training staff.

B. General Training Requirements

The Vendor must provide user-training programs in accordance with the Training Plan and for the benefit of the CDA and the management company that provides parking and ground transportation management services at the Airport. The Training Plan must provide designated System users and System maintenance personnel necessary to efficiently operate all applicable functions, modules, components or subsystems of the OPA.

All training must be conducted by a qualified instructor personnel fluent in English. Additionally, training must be conducted in a manner that does not adversely impact current OPA operations.

All rights of ownership to the recordings and all associated training materials of documentation provided by the Vendor under the requirements of this section shall become the exclusive property of the CDA. The recording requirement may or may not extend to the Supervisory/Auditor/Management or system administration training program. Recording of any Technician training shall be at the discretion of the Vendor.

Any and all training material shall be maintained and kept in a confidential manner as directed by the CDA.

C. Training Programs

1. System Administration Training

   The Vendor must conduct on-site training for CDA and selected OPA information technology professionals. This training must include in-depth presentation of the OPA Hardware and Software architecture and components. The training must also include a discussion of recommended practices for System and network administration, and the particulars discussed in the associated system administration manual. The Vendor must also have additional periodic technical support training responsibilities as detailed below. The Vendor must provide a description of the proposed training in the PMP.

2. Technician Training

   The Vendor is responsible for providing all training necessary to certify third-party technical personnel to perform all required OPA maintenance in accordance with the provision in these specifications and as required by the Vendor's System Design Documentation. The content and duration of the technician course shall be determined by the Vendor and approved by the CDA. Duly trained and certified technicians should be capable of performing all required maintenance services without voiding any written or implied warranty.

D. Training Materials

The Vendor must provide all documentation (including all manuals) required for training CDA personnel in printed and electronic format (CD-ROM – two complete sets). Documentation must be provided for each student in the form of workbooks, lecture notes/overheads, and manuals. All training must be based on the content of the Vendor-provided manuals delivered with the System, as part of the Training Plan and must be approved by the CDA prior to use.

Required training materials must be submitted in accordance with the provision of the training section and the PMP and must be written in Standard English with appropriate photos, diagrams, and schematics to supplement the text. The City shall have the right to reproduce and distribute the training materials as it deems appropriate.

E. Required Manuals

Where manuals for commercially available equipment and/or Software are provided, the Vendor must produce supplemental information to ensure the commercial manuals accurately reflect the deployed OPA. The OPA is not considered delivered until documentation is delivered.

The Vendor must provide the following OPA specific manuals, as described below:

1. System Administration Manual

   The Vendor must provide comprehensive instructions and procedures required to properly oversee the day-to-day function of all network and computer System components. This manual must include detailed instructions on all Software, special

reporting features, field-settable switches or options, workstation and server configuration options, network settings, TCP/IP addressing schemes if required, data archiving schemes, security schemes, disaster recovery and the use of system-specific diagnostics. The Vendor must provide three System administration manuals.

2. Maintenance /Technician Manual

The Vendor must provide complete documentation on the performance of all preventative, routine and corrective maintenance tasks. The documentation must include part numbers, amounts, and types required for each task. Diagrams (where applicable) must be included to illustrate each step in multi-step processes. Maintenance schedules (preventative maintenance) and troubleshooting guidelines for each component or sub-component must be included in tabular form. The manual must also include comprehensive instructions on accessing and using computer-based diagnostic Software included with the devices. The Vendor must provide ten (10) Maintenance/Technician Manuals.

XIX. SPARE PARTS

The Vendor must provide as part of their System Design Document a Bill of Material (BOM) of spare parts, components, and subcomponents based on the design of the system. At a minimum, the BOM should contain devices, components, and subcomponents so that there is at least the greater of one complete device or 10% redundancy for each specific type of device as recommended by the Vendor. Further the Vendor must ensure that the spare parts inventory is adequately sized and maintained to support the Vendor's maintenance and adherence to OPA availability. If in the event the CDA determines that additional spares are needed to properly maintain the system the Vendor shall be responsible to increase or modify the spare BOM at no cost to the CDA.

All spare equipment and replacement parts must be manufactured within the past six months and never installed in an operational System other than for factory test purposes. All spares must be identified by functional unit and must be correctly referenced in spare parts lists. When delivered as directed by the CDA, an itemized list of manufacturers' part numbers, model numbers, pricing, supplier's address, supplier's telephone numbers, and any single-source components shall be identified.

All spare equipment and replacement parts must be manufactured within the past six months and never installed in an operational System other than for factory test purposes. All spares must be identified by functional unit and must be correctly referenced in spare parts lists. When delivered as directed by the CDA, an itemized list of manufacturers' part numbers, model numbers, pricing, supplier's address, supplier's telephone numbers, and any single-source components shall be identified.

XX. WARRANTY AND MAINTENANCE REQUIREMENTS

A. Warranty Requirements

The Vendor must provide a full warranty on all installed components, materials and workmanship for a period commencing upon completion of Phase III and ending twelve months after Final System Acceptance. Such warranty requirement shall not apply to third-party Software which may have warranty periods shorter or longer than the installation period. All warranty information and documentation for each type of installed hardware, software or other System component become the property of the CDA and shall be delivered to the CDA upon Final Acceptance of the entire project.

B. Warranty and Maintenance Technical Support

The Vendor must continue providing extended warranty services, at no additional cost to the City, for all components of the OPA for a period of nine (9) years after the Warranty Period (Phase IV) expires. This requirement includes, but is not limited to: items such as spares, software updates and component updates, as well as telephonic and on-site maintenance support services. The Vendor also warrants that adequate in-house field service staff and telephone support are available from a location in the continental United States. The Vendor shall confirm this commitment in writing in a format acceptable to the CDA prior to initiating any work activities. In addition, a support letter must be provided from the manufacturer of any third-party components committing that firm to provide these technical support services should the Vendor withdraw from the public address system design and installation business.

C. Warranty Plan

The Vendor must provide a warranty plan as part of the submittal requirements. The total warranty plan shall present the services to be provided by the Vendor during the installation, twelve month warranty period (Phase IV) and nine year extended warranty period.

The Vendor must describe how it will provide these services on a non-interference basis with ongoing installation activities. The Vendor must also describe how it plans to interface with the revenue technician staff maintaining the existing System. The warranty plan must differentiate between the Vendor's responsibilities during and after the warranty period. The warranty plan must explain which extended warranty services are considered warranty repairs and which services are considered extended warranty services.

The warranty plan shall be based on the provisions of these technical specifications and the warranty plan should include recommended coverage and staffing options designed to meet the specific needs of the installed System even if these differ from those provided for below. The CDA shall review the contents of the warranty plan and, if necessary, request that the Vendor make corrections or clarifications.

The Vendor must provide all preventive, routine, and emergency maintenance services as part of the warranty and extended warranty services. Qualified, authorized representatives of the Vendor must perform diagnosis and repair. If so requested, the Vendor must provide written documentation of technician certification. Preventive maintenance services must be provided in accordance with the provisions of a Vendor's maintenance manual for each component or subsystem of the OPA.

Preventive maintenance services must include but are not limited to inspection, testing, necessary adjustment, and software/firmware updates. Routine maintenance services must include scheduled overhauls as recommended by the equipment and software manufacturer. Emergency services include inspections and necessary tests to determine the causes of significant equipment or software malfunction or failure. The emergency services also include the furnishing and installation of components, parts, or software changes required to replace malfunctioning System elements and restore proper operation.

D. Preventive Maintenance Schedule

The Vendor must submit to the CDA a schedule of preventive maintenance services and corresponding task sheets (as part of the required Maintenance Plan). To the extent possible, all such maintenance must be performed during off-peak periods.

E. Maintenance Log

The Vendor must maintain a written or electronic maintenance log of all preventive Maintenance and corrective/repair services performed during the warranty period and any subsequent maintenance agreement (the "Maintenance Log"). All maintenance activity must be tracked via this Maintenance Log. The Maintenance Log must be organized in manner that allows technician personnel to readily identify chronic or recurring service problems by component or sub-system. The Maintenance Log must include entries for any upgrades performed on any component so any unforeseen negative effects may be quickly isolated and reported.

The Maintenance Log must be in a format approved by the CDA and shall be available for inspection by the CDA at any time, on-line. The Vendor must also submit monthly maintenance reports (in a format approved by the CDA) based on the content of the Maintenance Log. Such reports must include a discussion of equipment availability and serviceability data over time (trend analysis).

F. Response Times

The Vendor is responsible for repair to the component level of replaceable, functional modules. The Vendor must provide adequate spare modules and repair turn around to assure that spare modules are available on site to accommodate repair of a failure to a confidence level that achieves the least amount of time that a component is inoperable.

The Vendor shall perform maintenance services to ensure the immediate repair and replacement of all OPA components to minimize any service loss or interruption.

Any and all reported issues or problems will be classified as one of the four following categories:

- **Critical**: Defined as any malfunction or fault that will result in a hazard to personnel or the public.
- **High Priority**: Defined as any malfunction or fault that will degrade the OPA performance, but not the operational ability of the OPA.
- **Medium Priority**: Defined as any event that has potential of resulting in a malfunction or degrading of the OPA performance.
- **Low Priority**: Defined as any event or malfunction that is cosmetic and presents no risk in affecting OPA performance.

In order to meet response times of 2 to 4 hours for the "Critical Mission" and "High Priority" classifications, Respondents must have service facilities within 75 miles of ORD.

If the resources are in excess of 75 miles from ORD, the City may consider if Respondents offer credible response plans to cover the "Critical Mission" timing classifications requirements

The following table defines the response time and repair time for each of the four (4) incident categories above.

Severity Level	Time to Respond	Time to Repair
Critical Mission	2 Hours	2 Hours
High Priority	4 Hours	4 Hours
Medium Priority	8 Hours	24 Hours
Low Priority	1 Business Day	5 Business days

Response and repair times will be calculated on a per event basis.

Response times will be determined based on when the Vendor receives notification of an event and the time the Vendor acknowledges said event. Repair times will be determined based on when the event is acknowledged and when it has been fully resolved, recorded and indicated.

The Vendor will generate and provide a report on a quarterly basis which indicates the previous quarters performance detailing adherence or failures to meet the response and repair times as indicated in the table above. The reports shall be in a format approved by CDA.

The Vendor must be responsible for the complete "Routine Maintenance" of the System, including without limitation the services listed below. "Routine Maintenance" includes, without limitation, repairs, adjustments, and/or replacement of System components on an exchange basis as necessary to maintain the System in good operating condition at all times, as well as the following:

- All technical and housekeeping tasks associated with the repair and preventive maintenance of the System must be in accordance with the manufacturer's specified preventive maintenance program, and all technical and housekeeping tasks required as a result of the upgrading of the System or as a result of modifications to the manufacturer's maintenance program as recommended by the Vendor.
- Software maintenance.
- Equipment (all hardware and components) maintenance, including unlimited in-house board-level repairs.
- Maintenance of an adequate working inventory and provision of all other maintenance materials, tools, and test equipment necessary for the services described herein. Exchanged parts must be rebuilt and maintained as part of such inventory; and reporting obligations, including without limitation the submission of reports, to the CDA as requested, which include, but may not be limited to, the following information:

    - Name of the technician performing the services
    - Date and time that repair began
    - Date and time that repair was completed
    - Type and model number(s) of components(s) used
    - Time spent for repair
    - Description of repair
    - List of parts repaired or replaced
    - All preventive maintenance performed
    - Signature of technicians(s) certifying the accuracy of the statement

Equipment availability is a key measure in measuring technician performance. Actions taken to remedy critical equipment component(s) malfunctions must commence immediately following the Vendor's receipt of a call for service from a duly authorized CDA representative.

Technicians must acknowledge notification of the problem, error, or fault within or less than the "time to repair" but not greater than 4 hours after notification of the problem, error, or fault.

G. Warranty and Extended Damages

In performance of any warranty or extended warranty activity the CDA may assess actual damages incurred for failure to meet the response and repair times.

ATTACHMENT 4: PROJECT SPECIFICATIONS AND EQUIPMENT LIST

PART 1

I. REFERENCES

A. Codes

Work shall be performed in accordance with current applicable requirements of governing codes, rules and regulations including the following minimum standards, whether statutory or not:

1. Chicago Building Code (CBC)
2. Chicago Electrical Code (CEC)
3. National Fire Protection Association (NFPA)
4. Federal Communications Commission (FCC)
5. Chicago Energy Code
6. Chicago Airport Systems Design and Construction Standards
7. Chicago Airport Systems Construction Safety Manual-Current Edition (See Exhibit 8)

B. Standards

Equipment and materials specified shall conform to the latest editions of the following standards where applicable:

1. UL – Underwriters' Laboratories
2. ASTM – American Society for Testing Materials
3. NEMA – National Electrical Manufacturer's Association
4. ANSI – American National Standards Institute
5. ETL – Electrical Testing Laboratories
6. SMPTE – Society of Motion Picture and Television Engineers
7. EIA – Electronic Industries Association
8. ISO – International Standards Organization
9. SCTE – Society of Cable Television Engineers
10. Sound Systems Engineering, 2nd Ed., Davis and Davis, Howard W. Sams Co., 1987.

C. Conflicts

In the event of conflicts within the standards above, the more stringent provisions shall be applied.

II. OPA NEW SYSTEM DESCRIPTION

A. General

1. The existing legacy OPA head-end equipment in Terminals 1, 2, 3 and 5 shall be replaced

to upgrade the existing equipment and functionality. Additionally the OPA coverage shall be expanded into parking lots, ATS stations, Bus Shuttle Center, and other work areas as shown in the reference drawings and as listed in these documents. This may be achieved by expansion of the main OPA system or by tying signals from the main OPA system into existing stand-alone PA systems in these areas.

2. The existing OPA infrastructure and equipment located beyond the head-end room shall be re-used where possible. Equipment and infrastructure identified for re-use includes:

    a. Ambient noise sensing microphones

    b. System paging stations and microphones

    c. All incoming and outgoing OPA cabling to the head-end equipment rooms

    d. Loudspeakers

3. It is expected that in order to utilize existing equipment beyond the head-end room that modifications and/or conversion of signal type will be required to achieve a functional system.

4. Configure the OPA system equipment in order to provide general and emergency announcements; however the system is not intended nor certified for mass notification.

5. The OPA shall remain fully functional during the phased replacement.

B. OPA New System Description Specifics

1. General
    a. All components of the system shall be controllable through a microprocessor-based announcement control system. Each terminal head-end equipment room shall have an announcement control system that interfaces with the other terminal announcement control systems and the airport TCP/IP network to provide a unified airport-wide paging capability.

    b. The microprocessor based control system shall manage all system functions and hardware including microphone communication stations, announcement queuing, telephone interfaces, distribution of airport wide announcements, local announcements, terminal announcements, background music distribution, announcement recording, and messaging.

    c. The system shall be entirely software driven, with all controls residing within password-protected software. No analog controls may exist anywhere in the system.

    d. Announcement and paging shall be provided to public areas zoned by function. Audio system circuiting shall allow reconfiguration and routing based on paging zone divisions and subdivisions.

    e. Announcements will originate from existing system paging microphone locations within the airport, the PBX phone system interface, and/or pre-recorded messages.

    f. The OPA is not a building code required critical life safety system. However, it should have the capability to support emergency messages during emergency or fire situations.

    g. Provide an interface from the fire alarm system to allow muting all PA inputs which are deemed low priority during an emergency situation.

h. Provide new OPA equipment in public areas and exterior environments that are ruggedly constructed and resistant to physical damage from weather, soil, sprays and inserting objects through speaker grille.

i. All low voltage speaker wiring shall be installed in conduit. EMT will be allowed for interior locations and PVC coated rigid conduit will be required for outdoor exposed locations.

j. Speaker installation within all parking lots may be installed in advance of the award of this RFP. The Schedule of Values (Exhibit 2) for these items shall be presented in both adds and credits in the event the speakers are installed by others.

k. Speakers shall be provided in all airline employee back-of-house locations such that emergency all-call pages are audible to all airline personnel engaged in back-of-house activities. Back-of-House areas include but are not limited to- offices, baggage handling areas, mechanical and electrical equipment rooms, customer service areas, workshops, break rooms, etc.

l. Provide speakers in all pedestrian center tunnel areas the CTA platform area adjacent to elevator center 4 and the entire utility ring tunnel.

m. Existing PA zoning for airlines remain unchanged from current configurations.

n. Acoustical simulation program “EASE” shall be used to determine the optimal speaker layouts in all areas of coverage.

2. The following documentation is provided as part of the bid documents to assist in the bid pricing and the Contractor’s evaluation of the existing systems:

   a. See attached list of Reference Documents

C. PA Announcement Control

1. Origination

   a. The OPA shall support live and recorded message announcements (minimum of 10 simultaneous) that originate from the PBX phone system, pre-recorded messages, and system paging stations.

   b. Messages originating from local gates intended for distribution beyond the local zone shall be queued into the digital message storage system and routed according to pre-established priority and zone access permissions.

   c. Other parts of the airport may be paged (e.g., last call for a flight) by telephoning the OCC and requesting a call. System Inputs and Priority.

   d. Final loudspeaker selection and locations shall be determined by the results of the “EASE” simulation program output.

2. System Inputs and Priority

   a. A desk mounted system paging microphone with a keypad shall be provided in the OCC and within each head-end equipment room to allow paging functionality and system testing to user selected OPA areas of coverage.

   b. Microphone consoles shall, where possible, be located in quiet and acoustically controlled spaces. They shall also be located away from location-specific noise sources, such as telephones and building services equipment.

   c. As a minimum, provide capability to support the following input signals, with the highest input priority given to the inputs with the lowest number:

      i. OCC microphone.

ii. Prerecorded Emergency Announcements.

iii. OPA Hold Room (Gate) system microphones.

iv. Other System microphones.

v. Slave microphones (configured for specific zone(s)).

vi. Prerecorded Courtesy Announcements.

vii. Auxiliary input / Background music.

viii. OPA - Test message.

ix. Test input.

d. Broadcast of a higher priority input shall automatically and silently mute any lower priority signal being broadcast in the selected zone(s).

e. Low priority signals (including future possible background music) which are being broadcast into zone(s) other than the selected zone(s) shall not be affected in any way.

f. Where multiple messages have equal priority (i.e., equal numerical ranking), the message priority will be based upon the order received (FIFO, first-in, first-out) status of the messages.

g. Priority and messages may vary within zones. The message priority shall be reviewed with OPA evaluation. Proposed message priority shall be submitted to Owner and Owner's Representative for review and approval.

3. Zoning

a. The OPA shall be divided into loudspeaker zones to allow routing of announcements to specific areas. Zone numbering logic shall follow from existing terminal OPA zones, determined in the system evaluation.

b. Loudspeaker zone numbering does not equate to, and shall not be confused with, fire detection zone numbering.

c. For the purposes of the OPA, each PA zone shall comprise one or more loudspeaker circuits. A detailed list of Zones and Circuits serving public areas will be determined by the contractor as part of the OPA evaluation.

4. Routing

a. Zone selection for general PA announcements and recorded messages originating from the PBX phone system, message server, and system paging stations shall be programmed to cover appropriate zones based on established message priority and paging code.

b. Zone selection for locally originating announcements, i.e. airline gates, will be routed based on priority assignment and selected zone coverage for gate-originated announcements.

c. Priority and routing will occur through an electronic matrix located in the given terminal head-end end room. This matrix will allow routing of announcements based on software-programmable message priority status, manual selection, or system routing override control.

5. Processing

a . The OPA shall include the capability to provide signal-processing functions for

individual input and output circuits.

b. Processing functions available include digital recording/playback queuing, equalization, system supervision and diagnostics, ADA-compliant visual paging and signage, text-to-speech translation, and remote networking and control interface.

6. Amplification

   a. Amplifier output shall be sized to drive all loudspeakers within a zone to their required sound pressure levels while maintaining a minimum spare output capacity of 25% of the amplifier's full rated output.

7. Loudspeakers

   a. Where new loudspeakers are required in low ceiling areas (less than 16 feet), provide 8" diameter ceiling-recessed loudspeakers.

   b. Where new loudspeakers are required in areas without ceilings or where ceilings are higher than 16 feet provide surface-mounted column loudspeakers.

   c. Provide tuning and equalization for all loudspeaker coverage zones per the requirements in Attachment No. 4-Part 3- Paragraphs IV & V

      i. Tuning should include output level, equalization, and adjustment/calibration of ambient noise sensors

8. Ambient Noise Sensing

   a. The OPA shall incorporate ambient noise-sensing hardware and processing to automatically adjust OPA zone output levels in response to changes in ambient noise levels in in that zone or zones.

   b. Each ambient noise sensing channel shall have adjustable settings that include time-variable audio level increase/decrease, and sensitivity control.

   c. The ambient noise sensing system shall be capable of distinguishing paging-generated sound signal from non-correlated ambient noise in the specific OPA coverage zone.

9. Connections To Other Systems

   a. The OPA shall have wired interface to the following systems

      i. Fire Alarm (Operation will depend upon optional configuration at the Fire Alarm head-end)

      ii. PBX Phone System

      iii. Voice over IP (VoIP) Phone System (future expansion)

   b. If provided, contact closures from Fire Alarm System will mute the OPA during an emergency.

   c. Alternately, Fire Alarm gongs will be muted from Fire Panel in the event a paging voice announcement needs to be made from the OCC (optional)

   d. The OPA shall have capability to be interfaced to PBX and VoIP phone system to facilitate voice announcements from telephone handsets. Phone based pages shall require a security code in order to enable a pre-recorded or live announcement.

10. Network Integration
    a. The system shall operate as a fully functional system utilizing the ESC Data Network architecture to connect distributed paging system controllers and send/receive digital audio.

    b. The system shall use the existing CDA and Boingo network architecture to connect CDA OPA head-end locations so that all-call announcements can originate from a single microphone station or phone based page.

    c. The OPA control interface shall be accessible via wired and/or wireless network devices where authorized users may remotely access the OPA control interface to address faults, diagnose the system, or make adjustments.

    d. Final network requirements for TCP/IP control and digital network audio transmission shall be coordinated with the owner prior to installation.

11. System Monitoring

    a. All components of the signal paths within the head-end equipment room shall be automatically and continuously monitored.

    b. Monitoring configuration and test points shall allow specific identification of the fault location, e.g. input stages, routing, and amplifiers.

    c. Signal paths within the head-end equipment rooms shall be automatically and continuously monitored.

    d. The monitoring system shall be inaudible in operation.

12. System Fault Reporting

    a. Fault warnings shall be provided within the PA rack via a visual indicator (fault light panel or equivalent).

    b. The OPA shall have the capability to report fault warnings by email. Configuration of this interface shall be coordinated with CDA.

13. Uninterruptible Power Supply

    The Vendor must supply, install, connect, and configure a UPS for each redundant server to allow a minimum of 30 minutes of full load uninterrupted operation of the System servers in the event of a power supply failure to one or both. The Vendor will have the option of purchasing a single centralized UPS at their discretion, provided that is has 50% excess load capacity. The Vendor must recommend the appropriate UPS support requirements to allow the servers to shut down gracefully in the event of power outage.

    The System must have the ability to monitor the status of the UPS (time remaining) and report this to a Central Control. In the event that the Utility Power has not been restored and, Stand By/Emergency Generators did not pick up the loads prior to depletion of the UPS Battery, the system must perform a systematic and, orderly shutdown.

14. System Reliability

    a. Failure of any pre-amplifier within a critical signal path shall result in the automatic substitution of a standby pre-amplifier. Alternatively a spare pre-amplifier shall be provided in the rack, in order to be substituted into the system via:

        i. Changeover switch for manual signal substitution, or

        ii. As a simple physical replacement of the defective unit with the spare unit.

    b . Failure of any signal processor or other central component within a critical signal

path shall result in either:

i. The automatic substitution of a standby unit, or

ii. an automatic bypass of the defective unit, where the bypass condition shall have the same overall gain as the processed condition, such that the overall output signal level is not changed, although the timbre or tonality may be different, or

iii. As a simple physical replacement of the defective unit with the spare unit.

c. Failure of any amplifier within a critical signal path shall result in the automatic substitution of a standby amplifier. The OPA design shall provide an amplifier backup ratio of 7:1 (one backup amplifier for every seven amplifiers).

d. If physical substitution is intended as a response to a failure for a component then (a) unique alarm indication will be required in order to identify the faulty unit and (b) there shall be clearly stated instructions as to the steps to provide the physical replacement.

e. The substitution must be capable of being carried out by non-specialist site personnel without the use of any special tool.

f. The correct operation of the OPA software by any microprocessor within the system shall be monitored by internal self-checking procedures and by an appropriate monitoring (e.g. watchdog) circuit.

g. Provide UPS systems with full power conditioning and a minimum of 30 minutes of reserve power at each OPA head-end location.

III. SUPPLIERS/INSTALLERS

A. General Qualifications

1. Respondent has been in business providing similar service for not less than five years.

2. Respondent is a licensed dealer for equipment described in these documents and maintains a service facility within 75 miles of the project site capable of maintaining those systems both on a component and a complete systems level. However, if Respondents offer credible response plans to cover the “Critical Mission” timing classifications requirements, the City may consider if the resources are in excess of 75 miles from ORD.

3. Respondent can outline the general scope of past projects, normal staffing levels, and union status of shop and field installation personnel.

4. Respondent can list a minimum of five (5) projects of similar scope successfully completed, indicating the location, type of system installed, total contract amount, date completed, and include persons and telephone number to contact.

5. Respondent can submit confirmation of current state or local contracting licenses, as required to perform the work under this section.

6. Own and maintain the tools and equipment necessary for successful installation and testing of systems as required and have personnel who are adequately trained in the use of such tools and equipment.

7. Employ at least one PA system programmer certified by the manufacturer of the new PA system utilized in the project and of the existing PA system.

8. Employ at least one engineer holding a current Certified Technology Specialist – Design (CTS-D) certification by InfoComm International. The engineer shall be assigned to

oversee technical aspects of the project

9. Employ at least one technician holding a current Certified Technology Specialist – Installation (CTS-I) certification by InfoComm International. The technician shall be assigned as the lead field technician overseeing the installation.

IV. BID SUBMITTALS

A. General

Provide bid submittals in accordance with project Proposal Requirements, and with the items in this section

B. PA System Evaluation

Furnish the total non-equipment cost for evaluation of each Terminal and the work areas.

C. Schedule of Compensation

Provide a Schedule of Values and quantities for equipment to be provided. Each piece of equipment shall be individually priced. Equipment costs shall reflect required modifications and accessories.

1. Schedule of Compensation in Exhibit 2 should be used for bid submission.

    a. The schedule of values provided should represent the quantity of equipment required to replace the existing head-end systems and provide coverage in work areas.

    b. The final quantities and equipment shall be revised by the contractor following their existing OPA system evaluation as described in this Exhibit 1 – Attachment 2 – Paragraph 1 – Existing System Evaluation.

D. Service Contract

See Exhibit 1-Attachment 3, Section XX for all system service/warranty requirements.

E. Substitutions

See Exhibit 1, Attachment 3, Paragraph II.E for the substitution procedure.

F. System Enhancements

Submit recommendations that will enhance the performance of the system, or reduce costs without loss of performance, in the bid submission. Suggestions that are of value to the Owner will be taken into consideration in the evaluation of the bid returns.

G. Contractor Resume

1. Provide a list of five recently completed projects of similar type and size with contact names and telephone numbers for each.

2. Provide information (technical resume of experience) for the Contractor's Engineer, Project Manager, Field Installer Supervisor, Control System Programmer, Lead Field Technician and any other relevant personnel who will be assigned to this project.

3. Provide a list of the technical product training attended by the Contractor’s personnel that will install the systems.

H. Sub-Contract Information

1. Identify sub-contractors and their responsibilities and qualifications in the Proposal.

2. Because of the complexity of the systems, the supervision of such sub-contracted work cannot be intermittent. Provide virtually continuous supervision of subcontractors during the installation.

I. Schedule of Implementation

1. Because of the magnitude of the project, it is possible that certain portions of the work described herein will be ready for use prior to the completion of the entire scope of this specification. The Owner reserves the right to use substantially completed systems without obligation to the Contractor and without implying acceptance of the systems or equipment so used.

J. Test Equipment and Software

1. Provide prior to commencement of existing system evaluation.

2. Provide a list of the test equipment, giving make and model numbers, which will be used in the system evaluation testing, and in the installation tests and acceptance testing.

3. Provide a list of the test/measurement software, giving software name and version, which will be used in the system evaluation testing, and in the installation tests and acceptance testing.

V. SHOP DRAWING SUBMITTALS

A. General

1. Shop drawings and data sheets shall be submitted as a single comprehensive package.

2. Partial submittals shall only be accepted with prior consent from the Owner's Representative.

B. Post-Award – Submittal 1

Provide after the award of contract and completion of OPA Evaluation but prior to equipment procurement and installation:

1. Project schedule including the following milestones:

    a. Submittal packages.

    b. Equipment procurement, indicate equipment with long lead times.

    c. Rack fabrication.

    d. Installation.

    e. Substantial completion.

    f. Acceptance testing.

    g. Owner/user training.

2. Binder containing product data sheets for equipment:
    a. Logically organized by system.

    b. Where a product data sheet includes more than one item, indicate model being proposed.

    c. Provide an index for reference.

C. Prior to Fabrication - Submittal 2

After the submittal, provide submittals consisting of the following:

1. Panels, plates, and designation strips drawings, including details and samples relating to terminology, engraving, finish and color.

2. Detail drawings for:

    a. Custom designed consoles, tables, carts, support bases, and shelves.

    b. Custom circuitry.

    c. Unusual equipment modifications.

3. Control System Interface Submittal:

    a. Preliminary layouts of all remote control interfaces submitted on disk and hardcopy.

    b. For each piece of equipment, lists of the functions under control of the remote control interface.

    c. For each piece of equipment, a list of all inputs (feedback) to the remote control interface.

    d. A list of all equipment in the remote control system.

D. Prior to Assembly and Installation – Submittal 3

Prior to assembly, provide submittals consisting of the following:

1. System functional block drawings: For video, audio, and control systems, drawings include equipment names and model numbers (e.g., "Program Amplifier - Crown ZZ- xxx"), connectivity and cable types. Clearly label each item of equipment shown on the drawing with the manufacturer's terminal number or input/output designation (e.g., "Mic 1 In", or "Record Out Left").

2. Equipment rack and patch panel assignment drawings: Provide scaled equipment rack elevations and full scale patch bay drawings with proposed labeling. Labeling on the functional diagrams, rack elevations, patch panels and on the equipment controls shall be consistent and uniform.

3. Provide full-scale drawings of custom plates and panels indicating exact lettering, critical dimensions, and finish.

4. Run sheets or field wiring drawings: Clearly show at each terminal point the type of connector to be used and include typical wiring details of each connector. Note where all shields are connected to ensure the integrity of the grounding system. Call out wire types and color codes where appropriate. Assign wire numbers and patchbay locations to every wire and patch point in the drawing.

5. Equipment modification drawings: Include details of modifications that change or void manufacturer warranties.

6. Final schematic drawings of custom circuitry: Include receptacle pin numbers and component callouts. Show details of custom resistive combining networks, filters, or pads that may be required in the assembly. Show point-to-point wiring drawings for control system modules and interfaces and for switches and relays in audio, video, or control systems.

7. Test Equipment: Provide a list of test equipment, including manufacturer, description, and model number, of equipment that is expected to be employed in the test and adjustment of the systems specified.

E. At the Completion of the Installation and Prior to System Acceptance Testing – Submittal 4

Provide submittals consisting of the following:

1. Notification: Provide written notification to the Owner's Representative when initial checkout is complete, normal settings are documented, as-built and operational documentation are complete, and systems are available for final acceptance tests.

2. Submit a draft version of Record Drawings for systems depicting the current state of the systems to be tested.

3. Submit a draft version of the Operation and Maintenance manuals which shall include the following:

    a. Equipment manufacturer's operation and maintenance manuals for each piece of equipment

        i. Detailed operation instructions that can be easily understood by non-technical users.
        ii. Normal settings for any user accessible controls.
        iii. A troubleshooting guide for the typical problems that might arise.

    b. Equipment list for each room with manufacturer, model number, serial number, client tracking number (if applicable), and other unique equipment numbers for installed equipment in spreadsheet format.

    c. A list of fixed or static IP addresses, ISDN numbers and telephone numbers used for public address system equipment.

    d. A list of frequencies and/or channels used for transmission of PA audio over O'Hare radio communications systems.

    e. Recommended maintenance schedule with reference to the applicable pages in the manufacturer's maintenance manuals. Where inadequate information is provided by the manufacturer, provide the information necessary for proper maintenance.

        i. A list of necessary and recommended replacement parts for a normal maintenance period of one year.

    f. Include the terms of the warranty and the appropriate contact phone numbers for service.

    g. Test and Measurement Data consisting of:

        i. Documentation of the tools and the manner in which the performance tests were taken.
        ii. Documentation of the performance test results.
        iii. Documentation of the system settings prior to and after the system set-up.

    h. System Software:

i. Software files for graphical user interface, source code, DSP, and equipment settings on CD-ROM.

ii. Provide electronic copies of compiled and un-compiled programming files and final system configuration settings.

F. Closeout Submittal – Submittal 5

The Closeout Submittal shall be provided within 30 days of systems acceptance and shall include:

1. Systems Information Packet: Packet shall be mounted in an equipment rack within each head-end room and shall consist of the system drawings associated with the rack, schedule of system inputs, outputs, paging codes, zone settings, important telephone numbers and a list of equipment in the rack with serial numbers.

2. Final Project Record Drawings: Submit on CD-ROM in Micro-Station and PDF format compliant with CDA CAD standards. Final Project Record Drawings shall include drawings associated with the systems. The locations of installed conduits shall be shown on floor plan drawings.

3. Five copies plus an electronic .pdf version of the Final Operation and Maintenance manuals as described in Substantial Completion Submittal.

4. Manufacturers' instruction manuals for items of equipment, incorporating or followed by manufacturers' warranty statements. Where manufacturer's registration is required, register warranty in Owner's name at an address determined by Owner. Provide copy of registration.

VI. PERFORMANCE STANDARD

Meet the following performance standards with each system, unless restricted by the published specifications of a particular piece of equipment:

A. Audio Signal

1. Signal-to-Noise Ratio (including crosstalk): 55 dB minimum.

2. Total Harmonic Distortion: 0.1% maximum from 20 Hz to 20,000 Hz.

3. Frequency Response: + 1.0 dB, 20 Hz to 20,000 Hz.

B. Audio Reproduction

1. Signal-to-Noise Ratio (including crosstalk): 55 dB minimum.

2. Total Harmonic Distortion: 1% maximum from 30 Hz to 15,000 Hz.

3. Frequency Response:

   a. Distributed Speech Reinforcement System with 8" diameter loudspeakers: + 1.5 dB, a flat response from 125 Hz to 2.5 Hz, rolling off at 6 dB/octave from 125 Hz to 80 Hz, 18 dB/octave below 80 Hz, and at 2 dB/octave above 2.5 kHz, as measured on axis of the loudspeakers.

4. Sound Output Capability:

a. Provide speech reinforcement levels of not less than 75dBA at 5 ft. above the finished floor in the coverage areas without objectionable distortion, rattles, or buzzes, employing as test signals several different samples of pre-recorded speech, music, and/or speech via microphones, to be applied at each system input.

5. Hum and Noise: Hum and noise shall be inaudible (below the background noise level of the space) under normal operation and as observed in normal coverage locations.

VII. DELIVERY, STORAGE AND HANDLING

Bear costs of shipping to the site, and of unusual storage requirements. Make appropriate arrangements, and coordinate with authorized personnel at the site, for the proper acceptance, handling, protection, and storage of equipment so delivered. See Attachment 3 for additional onsite storage requirements.

VIII. WARRANTY

See Exhibit 1-Attachment 3, Section XX for all system warranty requirements.

PART 2 – PRODUCTS

I. EQUIPMENT

Provide equipment as specified in the attached, “Equipment List”

A. The “Equipment List” is intended to present the major components of the systems and to provide information on the quantities of equipment and systems to be installed. Provide additional equipment and accessories as required to produce a complete and functional system consistent with the design intent.

B. To ensure that the latest technology equipment is provided to the project, at the time of installation supply the latest model of the product which is available for each piece of equipment. Any exceptions to this equipment should be identified and called out as same. Future technology releases that will occur during the project design and construction period shall be included in the original installation.

C. Should there be a difference in pricing between the equipment model cost at the time of bid and the pricing for the latest equipment model to be provided at the time of installation, the price differential will be compensated accordingly.

D. Materials: Supply materials and equipment that shall be new and shall meet or exceed the latest published specifications of the manufacturer.

II. CUSTOM FABRICATION

A. Electrical Power Connections: Electrical power junction boxes and circuits will be provided. Provide required interconnections to the power system from these junction boxes to the equipment and equipment racks.

B. Remote Control Panels and Receptacle Plates: Fabricate with 1/8 inch thick #6061-T6 aluminum material. Finish brushed with 150 grit paper. Anodized finish to be approved by the General Contractor.

C. Product Information Label: Permanently mount, at the top facing edge of each equipment rack, an engraved plastic laminate plate, with filled lettering on contrasting background. Plate shall identify "Design by “Vendor”—City and State-- Installation by: Contractor, City, ST."

D. Project Information Label: Permanently mount, at the top facing edge of each equipment rack, an engraved plastic laminate plate, with filled lettering on contrasting background. Plate shall identify "Design by “Vendor”—City and State-- Installation by: Contractor, City, ST."

E. Audio Transformers: Provide appropriate impedance ratio and power handling capacity for the

function intended of audio transformers specified in the system.

F. Networks and Pads: Provide networks and pads as shown on the drawings or as required to achieve proper impedance matching and levels. Networks and pads shall be balanced. 0.5 watt, 5% composition resistors shall be soldered to fixed connection points at each end.

G. Loudspeaker Enclosures: Loosely fill with glass fiber to 2 lbs/cu. ft. density prior to installing loudspeakers.

H. Labeling: Provide permanently mounted 1/32" thick by 1/4" high black lamicoid or anodized, brushed aluminum labels with 1/8" engraved lettering for each piece of equipment and every user-adjustable control and input on the audiovisual equipment.

I. Rack Mount Adapters and Security Covers: Provide the appropriate factory or custom rack mount adapters for equipment installed in the audiovisual equipment rack, whether specifically itemized or not. Provide security covers for equalizers, crossovers, signal delays, and other adjustable signal processors.

J. System Functional Diagrams: Provide reduced-size as-built functional diagram for the control, audio and video system. Frame with acrylic cover, or laminate drawing, and mount adjacent to equipment rack.

K. Seismic Safety: Mount and brace permanently installed equipment to the building structure to minimize potential damage to personnel or equipment from foreseeable seismic events. Physically bolt audiovisual equipment racks to the floor to prevent toppling. Brace hanging equipment such as loudspeakers, et cetera both to minimize sway and to prevent detachment from the overhead structure.

L. Equipment Rack: Provide power receptacle strips, with “U” grounded outlets. Power receptacle strips shall be mounted on the rear interior of the rack space on the left side as viewed from the rear. Insulate power receptacle strips from the rack. Power receptacle strips shall be UL approved for its intended use. Provide UL approved incandescent work light mounted on the upper left interior panel of each equipment rack.

PART 3 – EXECUTION

I. EXAMINATION

A. Examination of Premises: Visit Site to become familiar with local conditions under which work is to be performed and correlate observations with requirements of Contract Documents.

1. No allowance shall be made for claims for concealed conditions which Vendor, in exercise of reasonable diligence in observations of site and local conditions, should have learned of.

B. Verify that electrical requirements including junction boxes, floor boxes, ceiling loudspeaker enclosures, empty conduit and power circuits and receptacles are in place as shown on the drawings.

C. Inspect and review related electrical work to verify correct voltage, polarity, and grounding prior to interfacing power with audiovisual equipment.

D. Before ordering materials or doing work, verify measurements and be responsible for correctness of same.

1. No extra charge or compensation allowed for duplicate work or material required because of unverified difference between actual dimension and measurement indicated on Drawings.

2. Submit discrepancies found in writing to Owner’s Representative for consideration

before proceeding with Work.

E. Conduct walk through with Owner and Owner's Representative of work areas, describing specific work methods and proposed schedules, before commencing work, enabling Owner and Owner's Representative to identify areas of concern, desired installation timetables and review important procedural and safety precautions.

F. Prior to start of installation, meet at project site with Owner's Representative and other trades performing related work to coordinate efforts. Review areas of potential interference and resolve conflicts before proceeding with work.

G. Examine areas and conditions under which system is to be installed. Do not proceed with work until satisfactory conditions have been achieved. Notify Owner's Representative if conditions are unacceptable and schedule will be affected.

II. INSTALLATION

A. General: Include the delivery, unloading, setting in place, fastening to walls, floors, ceilings, counters, or other structures where required, interconnecting wiring of the system components, equipment alignment and adjustment, and other work, whether or not expressly required, which is necessary to result in complete operational systems.

B. If in the opinion of the Vendor, an installation practice is desired or required, which is contrary to these specifications or drawings, a request for modification shall be made in writing to the Owner's Representative. Modifications shall not commence without written approval from the Owner's Representative.

C. Coordinate work with other trades and existing conditions to determine exact routing of cable tray, hangers, conduit, etc., before fabrication and installation. Where more than one trade is involved in area, space, or chase, cooperate to utilize space appropriately in relation to their individual requirements

D. Physical Installation:

1. Firmly secure equipment in place unless requirements of portability dictate otherwise.

2. Provide adequate to support for fastenings and supports with a safety load factor of at least five.

3. Suspended components that move or are otherwise subjected to continuous wear or friction shall be supported with a minimum safety factor of 8.

4. Work (boxes, equipment, etc.) shall be installed level and plumb, parallel and perpendicular to other building systems and components.

5. Attain the stamped approval of a licensed Structural Professional Engineer for equipment that is mounted overhead, or attached in a manner or location that could impact the integrity of the building structure or cause personal injury.

6. Loudspeaker back cans shall be supported from the building structure, or from the ceiling suspension system in acoustical tile ceilings, and provided with a safety wire fastened to the building structure

7. Give consideration, not only to operational efficiency, but also to overall aesthetic factors in the installation of equipment and cable.

E. Cable Installation:

1. Mark cables, regardless of length, with permanent, non-handwritten number or letter cable markers within six inches of both ends. There shall be no unmarked cables in the system. Marking codes used on cables shall correspond to codes shown on drawings and/or run sheets.

2. Furnish screw-type terminal blocks, boards, strips, or connectors, for cables which interface with racks, cabinets, consoles, or equipment modules. Terminate wires terminating at screw-type terminals with crimp-on lugs. "Telephone-style" punch-down blocks are not acceptable for signal or data wiring.

3. Where cables are passing through holes the edges of the holes shall be covered with rubber or nylon grommets

4. Group cables according to the signals being carried. In order to reduce signal contamination, form separate groups for the following cables:

    a. Power cables

    b. Control cables

    c. Video cables

    d. Camera cables

    e. Audio cables carrying signals less than minus 20 dBm.

    f. Audio cables carrying signals between minus 20 dBm and plus 30 dBm.

    g. Audio cables carrying signals above plus 30 dBm.

    h. Broadband RF cables.

    i. CAT-5/6 Data Cables

    j. Fiber cables may be grouped with any of the other cable types.

5. Unless otherwise called for in these specifications and drawings, use the following cables, or their approved equals, in these systems:

    a. Microphone and Line Level Cables: Belden 1800B Shielded Twisted Pair Cable.

    b. Microphone and Line Level Cables in Racks: Belden 8761 Shielded Twisted Pair Cable

    c. 70 volt Loudspeaker Cables: Belden 8471 #18 AWG Unshielded Twisted Pair Cable.

    d. DC Power Cables: Belden 8473 #16 AWG Unshielded Twisted Pair Cable.

    e. Low-Impedance Loudspeaker Cables: Belden 8473 #16 AWG Unshielded Twisted Pair Cable.

    f. RS-232/RS-422/RS-485 Control Cables: Provide Shielded Data Cable.

    g. Data/Power Cables: Provide Data/Power Cable.

h. UTP Cable: Provide Category 6 UTP Cable.

i. Optical Fiber Cable: CommScope P-008-DS-8W-FSDY

6. Cut cables (except video, camera and any cables that must be cut to an electrical length) to the length dictated by the run. For equipment mounted in drawers or on slides, provide the interconnecting cables with a service loop of appropriate length.

7. Install no cable with a bend radius less than that recommended by the cable manufacturer.

8. Clearly identify cable terminated in a floor pocket with permanent, indelible labels within 6" of the cable connector. Provide strain relief for cables. Provide connectors with metal shell/casing. Provide a minimum of 3' of free cable coiled in the floor pocket. Use spiral wrap to group similar cable types.

9. Use plenum-rated cable in plenum-rated spaces. Where plenum-rated cable is used, provide plenum-rated and approved tie-wraps and supports (Thomas & Betts #TYV525M, or approved equal).

10. All speaker cable shall be installed in conduit. EMT is acceptable for areas that are not subject to physical damage from external forces. Use IMC for all other areas. RGS shall be used for outdoor installations.

F. Receptacle Plate Connectors:

1. Audio connectors shall be solder type and incorporate metal shells and bodies.

2. Use only rosin core solder or approved mechanical connectors for joints and connections within the system. Twist-on wire nuts are not acceptable.

3. Unless otherwise detailed herein, use the following types of panel receptacles on connection boxes, panels, plates, and wireways:

a. Audio (microphone): XLR (female) type, without locking tab, such as Switchcraft Y3FD.

b. Audio input/output (line-level): 1/4 inch diameter tip/ring/sleeve type. Insulate from panel

c. UTP Connectors: vendor to provide specific equipment types

d. Fiber Optic Connectors: vendor to provide specific equipment types

4. Terminator: Provide 75Ω terminators where required.

G. Plate Designation: Clearly engrave wall-mounted receptacle plates with alphanumeric identification of input type (i.e., mic, line, speaker, video etc.) and corresponding audio or video patch field designation.

H. Receptacle Plate Type: Stainless Steel Industrial Grade Finish

I. Patch Panel Assignments: Wire patch panels so that signal "sources" (outputs from) appear on the upper row of a row pair; and "loads" (inputs to) appear on the lower row of a row pair.

J. Patch Panel Designation Strips: Utilize alphanumeric identifications and descriptive

information on audio and video patch panel designation strips. Number the jack positions in each horizontal row sequentially from left to right. Letter the horizontal jack rows sequentially from top to bottom. Include the alphanumeric identification of each jack on the functional block drawings, as well as on reproductions of these drawings which shall be mounted in an appropriate location near the patch bays.

III. EQUIPMENT RACKS

A. Fabrication:

1. Perform rack fabrication before delivering the racks to the job site. Only wiring and terminations dependent on external devices shall be done at the job site.

2. Locate equipment to allow proper airflow and ventilation. Provide ventilation to ensure rack temperatures do not exceed 100 degree Fahrenheit after 5 hours of continuous operation

3. Provide rack shelves for ancillary equipment

4. Test equipment power and functionality prior to delivering the racks to the job site.

5. Provide sufficient AC power distribution within the rack to support equipment as well as two spare, non-switched, convenience outlets. One convenience outlet is to be readily accessible from the front and one readily accessible from the rear of the rack.

6. Provide service loops within the equipment rack for cables connected to external devices.

B. Installation:

1. Locate equipment in racks to comply with ADA guidelines.

2. Install equipment racks level and plumb with the room and with adjacent racks.

C. Rack Cabling:

1. Organize inner-rack cables in an orthogonal manner and organized into neat harnesses by cable type. The rear of equipment shall be fully visible without an array of cables in the way.

2. As a general practice, run power cables, control cables, and high level cables on the left side of an equipment rack as viewed from the rear. Run other cables on the right side of an equipment rack, as viewed from the rear.

3. Horizontal cable management in rack shall be neatly tied in manageable bundles with cable lengths cut to minimize excessive cable slack, but allowing for service and testing.

4. Provide horizontal support bars if necessary so that cable bundles do not sag.

5. Panels mounted on the rear rack rails shall not block access to front mounted components or conflict with vertical cable management.

6. Adhesive backed cable tie anchors are not acceptable.

7. Velcro style cable wraps shall be used in vertical wire management. Plastic cable ties shall not be acceptable.

8. Arrange unlike signal types in separate harnesses maintaining adequate

separation distances to avoid interference.

9. Provide cable service loops at devices for inspection, minor adjustment, and future flexibility

D. Grounding Procedures: In order to minimize problems resulting from improper grounding, and to achieve maximum signal-to-noise ratios, adhere to the following grounding procedures:

1. General: Because of the great number of possible variations in grounding systems, follow good engineering practice, as outlined above, and deviate from these practices only when necessary to minimize crosstalk and to maximize signal-to-noise ratios in the audio, video, and control systems.

2. System Grounds: Establish a single primary "system ground" for the systems in each particular area. Connect grounding conductors in that area to this primary system ground. Provide the system ground in the audio equipment rack for the area. The ground shall consist of a copper bar of sufficient size to accommodate secondary ground conductors.

3. Rack Ground:

   a. Connect the No.6 insulated copper wire connected to the earth ground to the primary system ground busbar in the Equipment Rack.

   b. Bond a No.12 TW stranded wire from the Equipment Rack frame to the primary system ground bus bar.

4. Equipment Grounds: Grounding methods used will be dependent upon individual equipment interconnection of chassis ground, circuit common, and power supply common within the units. Provide ground method for equipment types as follows:

   a. Equipment having a 3-wire power cord with green wire of the power cord connected to chassis (Signal common is not internally connected to chassis): Make no connection from chassis ground to primary systems ground busbar in Equipment Rack.

   b. Equipment having a 3-wire power cord with green wire of the power cord connected to chassis: Make no connection from chassis ground to primary system busbar, but do make connection with 14AWG insulated wire from circuit common to primary system ground busbar in Equipment Rack. Separate circuit common from chassis ground.

   c. Equipment having a 2-wire power cord, no green wire, neutral is not tied to chassis and circuit common is tied to chassis: Make connection from chassis to primary system ground busbar using 14AWG insulated wire.

   d. No 3-wire power cord shall have its third prong (ground) removed or defeated.

5. Audio Cable Shields: Ground audio cable shields at one point only. There are no exceptions.

   a. For inter- and intra-rack wiring connect the shield at one end only, this shall be at the input to a device.

   b. The shield shall be lifted at the device output. For ungrounded portable

equipment, such as microphones, the shield shall be connected at both ends but grounded at only one end.

6. EMI

   a. To minimize potential EMI issues audiovisual distribution cabling shall not be run alongside power lines or share the same conduit, channel or sleeve with electrical apparatus.

IV. FIELD QUALITY CONTROL

A. Initial Tests and Measurements: Before final adjusting and acceptance tests are scheduled, perform system checkout. Furnish required test equipment and perform work necessary to determine and/or modify performance of the system to meet the requirements of this specification.

B. Checkout Preparation:

1. The following must be completed prior to system acceptance testing:

   a. Interior finishes and furnishings shall be in place for these tests

   b Confirmation of complete and proper labeling of system components.

   c. Provision of reduced-size Block Drawings to a rack in each location.

   d. Removal of boxes and debris from the project site.

   e. Delivery of portable and spare equipment to the premises, tested and stored as directed.

   f. Tests and adjustments performed in the sequence specified herein

2. General Setup:

   a. Verify that OPA related components are free from rough or jagged edges.

   b. Verify that rack ventilation is working properly.

   c. Test uninterruptible power supply units and back-up battery power to verify proper operation.

   d. Verify that systems are free from oscillation and stray RF interference.

   e. Test and verify continuity and proper termination of every cable in the system.

   f. Following final acceptance of system set-up and performance, equipment with front panel controls not normally adjusted by the operator shall have the controls disabled, mounted behind blank panels or furnished with security panels.

C. Include the following:

1. Test audio, video, RF, optical, and remote control systems for compliance with the functional requirements and Performance Standards.

2. Adjust, balance, and align equipment for optimum quality and to meet the manufacturer's published specifications.

3. Prepare and maintain documentation of performance tests, including numerical values of established equipment settings, for reference during the System Acceptance Tests. Submit final results prior to scheduling Final Acceptance Tests Manual.

4. Install 1/8" diameter vinyl "map dots" as indicators for nominal operating positions of any rotary, slider, or switch controls available for operator physical adjustment. Provide multiple indicators, adequately distinguished, for controls having more than one nominal operating position.

5. Follow Electronic Industries Association Standards RS 219 and RS 160 in performing these tests.

D. Audio System:

1. Loudspeaker-Line Impedance:

a. Measure the impedance of each loudspeaker home-run at 250 Hz, 1 kHz, and 4 kHz with the line disconnected from its normal driving source.

b. For lines to full-range distributed loudspeaker systems, measure the magnitude of impedance at 1 kHz.

c. Reject and correct measurements that differ significantly from calculated values or fall outside of amplifier specifications.

2. Loudspeaker Polarity:

a. Perform polarity checks of loudspeaker lines by means of a polarity tester or use DC source at one end of each line and a voltmeter at the other end. Loudspeaker lines shall be identically polarized with respect to color-coding.

b. Test polarity of the loudspeakers using a sine-wave test signal warbled about 500 Hz. The listener shall be located on axis of the loudspeaker. Switch the loudspeakers from nominally in polarity to nominally out of polarity with respect to the selected loudspeaker. With the loudspeakers in proper polarity, the quality and clarity of the music or speech should be greater, and the warble test signal should clearly come to the surrounding space from the loudspeaker.

3. Hum and Noise Level:

a. Measure the hum and noise levels of the overall system for each microphone input channel and line-level input channel.

b. Adjust gain controls for optimum signal-to-noise ratio so that full amplifier output will be achieved with 0 dBm at a line-level input.

c. Terminate line-level inputs with shielded resistors of 150 and 600 ohms, respectively, for these measurements.

d. Disconnect the loudspeaker lines and terminate the power-amplifier outputs with power resistors for these measurements. The value of the load resistor shall be within 5% of the nominal load impedance of the amplifier under test. The power rating of the resistor shall equal the power rating of the amplifier.

4. Sound Levels:

a. General

i. Use an approved Type 2 Sound Level Meter for all acoustic measurements. The sound level meter shall have had a full calibration within the last 24 months and level calibrated before commencing measurements on a given survey.

ii. The sound levels shall be measured using a dBA sound level meter set to the LAeq statistical percentile, with the meter set to slow (S) response. The sound level shall be measured over a minimum 30 second period.

iii. Measurements shall be taken at 5 ft. above the finished floor in representative areas of the airport covered by the system where pedestrian traffic is typical.

b. Measurement locations and corresponding sound levels shall be marked up on the Contractor's loudspeaker layout drawings.

i. The drawings shall also indicate the final tapping value of each loudspeaker or each set of similar loudspeakers.

c. Ambient Noise

i. Measure and document the octave band and LAeq ambient noise level in each loudspeaker zone in the system under typical operating conditions

5. Loudspeaker Output Level

a. Prior to setting loudspeaker output level perform system gain staging adjustments.

b. The minimal loudspeaker level shall be at least 15 dB above the ambient noise level at the furthest listener

c. The required sound level shall be set within one area (average of at least three measurement locations within one zone) using a pink noise signal fed into the system via the test input and the test input gain (not the amplifier gain or loudspeaker tappings) shall be adjusted to obtain the required sound level.

d. Using a pre-recorded announcement or test message verify that the output level is still at the proper setting, if not, adjust the test input gain to provide the required sound level.

e. The pink noise input gain setting shall be noted and used to set up the sound levels at all other locations. One zone shall be selected at a time to minimize disturbance.

f. If the measured sound levels do not meet the required levels then adjustments shall be made to the loudspeaker tappings. The documented levels shall be the measured levels after adjustment. Any areas where the required levels cannot be achieved shall be highlighted on the drawings.

g. The pink noise test shall ensure that the relative sound levels between different areas are correctly set. Once this is completed each system input needs to be set correctly. This shall only involve measurements at two locations and

adjustment of the pre-amplifier setting of each system input.

h. The sound levels produced by each microphone input shall be measured and adjusted until the required sound levels are reached.

i. Three different voices, repeating the words of the test message, shall be used to assess each microphone output.

ii. The levels shall be set such that the arithmetic average of the three measured levels agree with the target level.

iii. The microphones should be used with the talkers at the appropriate working distance from the microphone head. This distance shall be recorded with documented sound levels

6. Freedom from Parasitic Oscillation and Radio-Frequency Pickup:

a. With systems set up for each mode of operation specified in the functional requirements, check to ensure that systems are free from spurious oscillation and radio-frequency pickup, in the absence of audio input signal and when the system is driven to full output at 100 Hz.

b. Employ an oscilloscope having at least 5 MHZ bandwidth for these checks.

c. Apply slow sine-wave sweep from 50 Hz to 5 kHz at a level of 6 dB below rated power-amplifier output voltage to each system. Listen carefully for buzzes, rattles and objectionable distortion.

d. Correct causes of these defects unless the cause is clearly from other than the sound amplification system's equipment and installation, in which case bring the cause to the attention of the other trades sub-contractors.

7. Uniformity of Coverage:

a. Using pink noise at the nominal operating level as the source and measuring in the 4 kHz octave band with a sound pressure level meter at the typical listening height, verify that there is a variance of no more than a plus or minus 3 dB within the listening area. It is understood this may vary for existing OPA loudspeakers. Document any variances greater than 3 dB.

8. Frequency Response:

a. Using accepted and approved 1/3 octave analysis equipment or FFT-based analysis equipment/software supporting 1/3 octave band or transfer function analysis, adjust equalizers to achieve the system frequency response described in Exhibit 1 – Attachment 4 – Part 1 – Paragraph VI.B.3.a.

b. Document the ambient noise level with the system off as well as the sound pressure level with the system on. Note those bands where the sound pressure level with the system is on is less than 10dB above the ambient noise levels.

c. Perform this measurement and setup only after furniture and floor, wall, and ceiling treatments have been installed.

d. Avoid equalizer settings that result in a 6 dB or greater change from either adjacent band.

e. Take an average of measurements performed at a variety of locations in the room to verify consistency of frequency response.

f. Document both the un-equalized and equalized average frequency response curves of the room and include the graphs in the Project Record documentation.

g. Properly adjust processing equipment, such as compressors, limiters and feedback eliminators for typical operation.

9. Spurious Noises:

a. Verify that the system is free from pops, crackle, hum, and other distortion when active controls are operated, in the absence of audio input signal and when the system is driven to full output at 100 Hz.

b. Using an electronic audio oscillator, slowly sweep through the usable frequency band of the sound system at a level of 6 dB below rated power-amplifier output voltage to each system in order to verify that the system and other building elements are free from buzzes or rattles.

c. Correct causes of these defects unless the cause is clearly from other than the sound amplification system's equipment and installation, in which case bring the cause to the attention of the Owner's Representative.

10. THD+N:

a. Measure and document the THD+N at 15 dB above nominal operating level for entire audio system signal chain. Test from output of all line level input device and end with amplifier input cable.

b. Reject and correct measurements that exceed 0.5% between 40 Hz and 20 kHz.

11. Audio Test Signal Paths: Verify operation from source inputs (for microphones, audio tape units, video tape units, etc.) through ADAs, mixers, switchers, etc., to signal destinations.

E. Control Equipment Setup and Testing:

1. Test all hardwired and wireless network connections connected to the audiovisual system.

2. Verify proper operation of all equipment and devices connected to the audiovisual control system.

3. Verify correct function of all control system operations, including, but not limited to:

a. Equipment powers on and off correctly and in the proper order.

b. User is locked out of the system during system start-up and shutdown, timers are provided if this is an excessive period.

c. When system is "shutdown" all appropriate audio has stopped playing.

d. Gauges and feedback are registering correctly.

e. Automated functions are sequencing properly.

f. Interfaces are registering the same feedback.

g. Devices are being controlled using the most robust control method available

4. Verify installed GUI complies with approved design.

5. Provide and verify system password protection and backdoor password.

F. Control System:

1. Verify operational functions at each control receptacle position.

2. Verify operational functions of wireless control device.

3. Verify operational functions of the control system and interfaced devices.

V. ACCEPTANCE TESTING

A. Before Acceptance Tests are scheduled, perform a system checkout. Furnish all required test equipment and perform all work necessary to determine and/or modify performance of the system to meet the requirements of this specification. This work shall include the following:

1. Submission of the test and measurement data.

2. Test all audio and related systems for compliance with the System Setup and Performance Verification as specified herein.

3. Check all control functions, from all controlling devices to all controlled devices, for proper operation.

4. Adjust, balance, and align all equipment for optimum quality and to meet the manufacturer's published specifications. Establish and mark normal settings for all level controls, and document these settings in the Operation and Maintenance Manual.

5. Unless otherwise specified, use tamper-proof security covers on all controls affecting overall system level balance and signal-to-noise ratio, such as power amplifier input level control, and input-output level controls for equalizers, mixers, amplifiers, etc. Some controls may require re-adjustment as the result of Acceptance Testing.

6. Maintain documentation of all performance tests for reference by the Owner’s Representative during the System Acceptance Tests.

a. Upon completion of the tests and necessary adjustments, submit a digital copy of a written report presenting test results, including numerical values of all measurements, for review by the Owner’s Representative prior to demonstration and System Acceptance testing.

b. With the above report, submit written certification that the installation conforms to specifications, is complete, and is ready for inspection and testing by the Owner’s Representative.

7. Meet with the Owner and the Owner’s Representative and make system changes as directed.

B. Upon completion of the Contractor’s system checkout and performance verification, demonstrate the proper operation of all PA systems in the project to the Owner’s Representative.

C. Provide a qualified technician knowledgeable with the system and the installation to assist the Owner's Representative with the acceptance procedure.

D. The Contractor shall provide all labor, materials, tools, and measurement equipment necessary for these demonstrations, tests and adjustments.

E. System Acceptance Tests will not be performed until the Contractor's system checkout has been completed. The System Acceptance Tests will be supervised by the Owner's Representative and will consist of the following:

1. A physical inventory will be taken of all equipment on site.

2. The operation of all system equipment shall be demonstrated by the Contractor.

3. Both subjective and objective tests will be required to determine compliance with the specifications.

4. Acceptance Tests may include speech intelligibility surveys and subjective evaluations by observers listening at various positions under various operating conditions, using speech, music, and live or recorded effects material. Acceptance tests shall include viewing of monitor images for sharpness, contrast, brightness, and color.

5. Measurement of frequency response, distortion, noise, wave form, color vector, or other characteristics may be performed (or a demonstration test requested) by the Owner's Representative on any item, or group of items, deemed necessary to determine conformity with criteria.

6. All final Record Drawings, run sheets, manuals, and other required documents, as detailed herein, shall be on hand. Two complete sets of these documents shall be delivered to the Owner's Representative at this time. (One complete set shall have been delivered to the Owner's Representative prior to the scheduling of Acceptance Tests).

7. In the event further adjustment is required, or defective equipment must be repaired or replaced, tests may be suspended or continued at the option of the Owner's Representative.

a. If the need for further adjustments becomes evident during the demonstration and testing, continue work until the installation operates properly. Included in the continued work shall include, but not be limited to, changes to or installation of resistive pads, readjustment of loudspeaker aiming, adjustment of system equalizers, programming changes to the control system, convergence of the video projector, if these adjustments are required.

b. If acceptance of the system is delayed because of defective equipment or because the equipment does not fulfill this specification, reimburse the Owner for time and expenses for these tests during extensions of the acceptance-testing period.

VI. DEMONSTRATION AND INSTRUCTION

A. Upon completion of the system installation and acceptance procedure, provide 80 hours of system training and orientation for the CDA and Airlines personnel. An individual intimately familiar with the equipment in the system and qualified to explain it in detail should conduct the training. When an employee capable of providing such training is not available, provide another employee qualified to do so at no additional fee.

B. Conduct the training prior to the CDA and the Airlines personnel using the system for the first time to ensure proper usage. If necessary, conduct the training at a time outside of normal business hours at no additional fee.

C. Instruction shall include, but not be limited to:

1. Physical review of installed systems.

2. Review of systems documentation and test results.

3. Instructions on standard care and maintenance methods to enable Owner's personnel to successfully maintain system.

4. Additional CDA and Airlines personnel requirements defined during project.

5. Include "Quick Reference Guide" instruction cards for all radio shop and designated airline users. "Quick Reference Guide" structure to be determined after training sessions are completed and format can be developed. Provide 50 guides in bid price.

VII. CLEANUP AND REPAIR

Upon completion of the work, remove refuse and rubbish from and about the premises, and shall leave the relevant areas and equipment clean and in an operational state. Repair damage caused to the premises by the installation activities, at no cost to the Owner.

VIII. PROTECTION OF WORK

During the installation, and up to the date of final acceptance, protect finished and unfinished work against damage and loss. In the event of such damage or loss, replace or repair such work at no cost to the Owner.

REFERENCE DOCUMENT LIST

See Exhibit 9 Project Wise Access Instructions for Access to the Reference Document

Equipment List

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est. Qty
PA System Head-End Equipment					
Terminal 1, General	Ambient Noise Sensing Hardware	Ambient noise sensing for up to two ambient noise microphones	Biamp	ANC-1	17
	Paging Microphone Analog to Digital Conversion	Networked audio input expansion device, 6 analog mic/line inputs, integrated DSP	Biamp	VI-6	26
	Amplifier Chasis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	28
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	217
Terminal 1, B Room	Announcement Control System	Networked message server, message storage and playback, event scheduling, VoIP interface, logging, remote access	Biamp	MS-1	1
	Digital Microphone Station	Test mic for head-end room, 10 button keypad	Biamp	DS-10	1
	PBX to VoIP	8-port adaptor for phone extension conversion of PBX to VoIP	Cisco	SPA8000	1
	Rack Mounted LCD Monitor and keyboard	Access to PA systems control and settings from head-end equipment room	Rose Electronics	RackView Widescreen	1
	Network Switch	Layer 3 Managed switch, 10/100Mbps, 48 ports, fiber transceiver	Cisco	Catalyst 2948G-L3	1
	Cabling for Dressing Racks	Interconnect and network cabling in head-end	Various	Various	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est. Qty
	Equipment Rack		Middle Atlantic	WRK-44SA-27	10
	Equipment Rack Components	Screws, Blanks, Rails, etc.	Middle Atlantic	Varies (LOT)	1
Terminal 1, C Room	Announcement Control System	Networked message server, message storage and playback, event scheduling, VoIP interface, logging, remote access	Biamp	MS-1	1
	Digital Microphone Station	Test mic for head-end room, 10 button keypad	Biamp	DS-10	1
	PBX to VoIP	8-port adaptor for phone extension conversion of PBX to VoIP	Cisco	SPA8000	1
	Rack Mounted LCD Monitor and keyboard	Access to PA systems control and settings from head-end equipment room	Rose Electronics	RackView Widescreen	1
	Network Switch	Layer 3 Managed switch, 10/100Mbps, 48 ports, fiber transceiver	Cisco	Catalyst 2948G-L3	1
	Cabling for Dressing Racks	Interconnect and network cabling in head-end	Various	Various	1
	Equipment Rack		Middle Atlantic	WRK-44SA-27	14
	Equipment Rack Components	Screws, Blanks, Rails, etc.	Middle Atlantic	Varies (LOT)	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
Terminal 2, Head End Room	Announcement Control System	Networked message server, message storage and playback, event scheduling, VoIP interface, logging, remote access	Biamp	MS-1	1
	Ambient Noise Sensing Hardware	Ambient noise sensing for up to two ambient noise microphones	Biamp	ANC-1	10
	Paging Microphone Analog to Digital Conversion	Networked audio input expansion device, 6 analog mic/line inputs, integrated DSP	Biamp	VI-6	1
	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	12
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	91
	Digital Microphone Station	Test mic for head-end room, 10 button keypad	Biamp	DS-10	1
	PBX to VoIP	8-port adapter for phone extension conversion of PBX to VoIP	Cisco	SPA8000	1
	Rack Mounted LCD Monitor and keyboard	Access to PA systems control and settings from head-end equipment room	Rose Electronics	Rack View Widescreen	1
	Network Switch	Layer 3 Managed switch, 10/100Mbps, 48 ports, fiber transceiver	Cisco	Catalyst 2948G-L3	1
	Cabling for Dressing Racks	Interconnect and network cabling in head-end	Various	Various	1
	Equipment Rack		Middle Atlantic	WRK-44SA-27	4
	Equipment Rack Components	Screws, Blanks, Rails, etc.	Middle Atlantic	Varies (LOT)	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
Terminal 3, Head End Room	Announcement Control System	Networked message server, message storage and playback, event scheduling, VoIP interface, logging, remote access	Biamp	MS-1	1
	Ambient Noise Sensing Hardware	Ambient noise sensing for up to two ambient noise microphones	Biamp	ANC-1	15
	Paging Microphone Analog to Digital Conversion	Networked audio input expansion device, 6 analog mic/line inputs, integrated DSP	Biamp	VI-6	1
	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	9
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	67
	Digital Microphone Station	Test mic for head-end room, 10 button keypad	Biamp	DS-10	1
	PBX to VoIP	8-port adapter for phone extension conversion of PBX to VoIP	Cisco	SPA8000	1
	Rack Mounted LCD Monitor and keyboard	Access to PA systems control and settings from head-end equipment room	Rose Electronics	RackView Widescreen	1
	Network Switch	Layer 3 Managed switch, 10/100Mbps, 48 ports, fiber transceiver	Cisco	Catalyst 2948G-L3	1
	Cabling for Dressing Racks	Interconnect and network cabling in head-end	Various	Various	1
	Equipment Rack		Middle Atlantic	WRK-44SA-27	3
	Equipment Rack Components	Screws, Blanks, Rails, etc.	Middle Atlantic	Varies (LOT)	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
Terminal 5, General	Ambient Noise Sensing Hardware	Ambient noise sensing for up to two ambient noise microphones	Biamp	ANC-1	63
	Paging Microphone Analog to Digital Conversion	Networked audio input expansion device, 6 analog mic/line inputs, integrated DSP	Biamp	VI-6	12
	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	29
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	227
Terminal 5, Central Head End Room	Announcement Control System	Networked message server, message storage and playback, event scheduling, VoIP interface, logging, remote access	Biamp	MS-1	1
	Digital Microphone Station	Test mic for head-end room, 10 button keypad	Biamp	DS-10	1
	PBX to VoIP	8-port adapter for phone extension conversion of PBX to VoIP	Cisco	SPA8000	1
	Rack Mounted LCD Monitor and keyboard	Access to PA systems control and settings from head-end equipment room	Rose Electronics	RackView Widescreen	1
	Network Switch	Layer 3 Managed switch, 10/100Mbps, 48 ports, fiber transceiver	Cisco	Catalyst 2948G-L3	1
	Cabling for Dressing Racks	Interconnect and network cabling in head-end	Various	Various	1
	Equipment Rack		Middle Atlantic	WRK-44SA-27	47
	Equipment Rack Components	Screws, Blanks, Rails, etc.	Middle Atlantic	Varies (LOT)	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
Terminal 5, North Head End Room	Announcement Control System	Networked message server, message storage and playback, event scheduling, VoIP interface, logging, remote access	Biamp	MS-1	1
	Digital Microphone Station	Test mic for head-end room, 10 button keypad	Biamp	DS-10	1
	PBX to VoIP	8-port adapter for phone extension conversion of PBX to VoIP	Cisco	SPA8000	1
	Rack Mounted LCD Monitor and keyboard	Access to PA systems control and settings from head-end equipment room	Rose Electronics	RackView Widescreen	1
	Network Switch	Layer 3 Managed switch, 10/100Mbps, 48 ports, fiber transceiver	Cisco	Catalyst 2948G-L3	1
	Cabling for Dressing Racks	Interconnect and network cabling in head-end	Various	Various	1
	Equipment Rack		Middle Atlantic	WRK-44SA-27	4
	Equipment Rack Components	Screws, Blanks, Rails, etc.	Middle Atlantic	Varies (LOT)	1
Terminal 5, South Head End Room	Announcement Control System	Networked message server, message storage and playback, event scheduling, VoIP interface, logging, remote access	Biamp	MS-1	1
	Digital Microphone Station	Test mic for head-end room, 10 button keypad	Biamp	DS-10	1
	PBX to VoIP	8-port adapter for phone extension conversion of PBX to VoIP	Cisco	SPA8000	1
	Rack Mounted LCD Monitor and keyboard	Access to PA systems control and settings from head-end equipment room	Rose Electronics	Rack View Widescreen	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Network Switch	Layer 3 Managed switch, 10/100Mbps, 48 ports, fiber transceiver	Cisco	Catalyst 2948G-L3	1
	Cabling for Dressing Racks	Interconnect and network cabling in head-end	Various	Various	1
	Equipment Rack		Middle Atlantic	WRK-44SA-27	4
	Equipment Rack Components	Screws, Blanks, Rails, etc.	Middle Atlantic	Varies (LOT)	1
PA System, Public Space Equipment					
Terminal 1	Mic to Line Level Converter		Radio Design Labs	STM-1	153
	Power Supply for Mic to Line Level Converter		Radio Design Labs	PS-24AS	153
Terminal 5	Mic to Line Level Converter		Radio Design Labs	STM-1	68
	Power Supply for Mic to Line Level Converter		Radio Design Labs	PS-24AS	68
Terminal 1	Ceiling Loudspeakers		Atlas	C803A	800
B& C Concourses	Loudspeaker Transformer		Atlas	HT87	800
	Loudspeaker Baffle		Atlas	FA51-8	800
	Loudspeaker Back box		Atlas	96-8-7	800
Terminal 3	Ceiling Loudspeakers		Atlas	C803A	800
Concourses	Loudspeaker Transformer		Atlas	HT87	800
	Loudspeaker Baffle		Atlas	FA51-8	800
	Loudspeaker Back box		Atlas	96-8-7	800
Terminal 5	Ceiling Loudspeakers		Atlas	C803A	700
Concourses	Loudspeaker Transformer		Atlas	HT87	700
	Loudspeaker Baffle		Atlas	FA51-8	700
	Loudspeaker Back box		Atlas	96-8-7	700
Terminal 1, Lower Level					

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
B & C Pedestrian Tunnel	Ceiling Loudspeakers		Atlas	C803A	90
	Loudspeaker Transformer		Atlas	HT87	90
	Loudspeaker Baffle		Atlas	FA51-8	90
	Loudspeaker Back box		Atlas	96-8-7	90
Red Carpet Club, B Concourse	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
Baggage Claim	Ceiling Loudspeakers		Atlas	C803A	20
	Loudspeaker Baffle		Atlas	FA51-8	20
	Loudspeaker Transformer		Atlas	HT87	20
	Loudspeaker Back box		Atlas	96-8-7	20
	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Back box		Atlas	96-8-7	1
Back of House and Ring Tunnel					
Terminal 1	Ceiling Loudspeakers		Atlas	C803A	425
	Loudspeaker Transformer		Atlas	HT87	425
	Loudspeaker Baffle		Atlas	FA51-8	425
	Loudspeaker Back box		Atlas	96-8-7	425
Terminal 3	Ceiling Loudspeakers		Atlas	C803A	291
	Loudspeaker Baffle		Atlas	FA51-8	291
	Loudspeaker Transformer		Atlas	HT87	291
	Loudspeaker Back box		Atlas	96-8-7	291
Terminal 5	Ceiling Loudspeakers		Atlas	C803A	433
	Loudspeaker Baffle		Atlas	FA51-8	433
	Loudspeaker Transformer		Atlas	HT87	433
	Loudspeaker Backbox		Atlas	96-8-7	433

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	2
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	16
Terminal 1, Mezzanine Level					
Red Carpet Club, B Concourse	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
Terminal 1, Upper Level, Concourse B					
Red Carpet Club, B Concourse	Ceiling Loudspeakers		Atlas	C803A	10
	Loudspeaker Transformer		Atlas	HT87	10
	Loudspeaker Baffle		Atlas	FA51-8	10
	Loudspeaker Back box		Atlas	96-8-7	10
Women's Restroom	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Men's Restroom	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
TSA Tenant Space North	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Back box		Atlas	96-8-7	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
TSA Tenant Space South	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
	Loudspeaker Transformer		Atlas	HT87	1
Security Checkpoint 1	Ceiling Loudspeakers		Atlas	C803A	4
	Loudspeaker Baffle		Atlas	FA51-8	4
	Loudspeaker Transformer		Atlas	HT87	4
	Loudspeaker Back box		Atlas	96-8-7	4
Security Checkpoint 2	Ceiling Loudspeakers		Atlas	C803A	4
	Loudspeaker Transformer		Atlas	HT87	4
	Loudspeaker Baffle		Atlas	FA51-8	4
	Loudspeaker Back box		Atlas	96-8-7	4
Vestibule 1Da (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	3
	Loudspeaker Transformer		Atlas	HT87	3
	Loudspeaker Baffle		Atlas	FA51-8	3
	Loudspeaker Back box		Atlas	96-8-7	3
Vestibule 1Db (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	3
	Loudspeaker Transformer		Atlas	HT87	3
	Loudspeaker Baffle		Atlas	FA51-8	3
	Loudspeaker Back box		Atlas	96-8-7	3
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	2
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant	Biamp	AM-600	16

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
		voltage output (70V or 100V)			
Terminal 1, Upper Level, Concourse C					
Men's Restroom, East	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Women's Restroom, East	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Red Carpet Club, C Concourse	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Men's Restroom, Central	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Women's Restroom, Central	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Men's Restroom, West	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Women's Restroom,	Ceiling Loudspeakers		Atlas	C803A	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
West	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	2
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	16
Terminal 2, Lower Level					
UA Airways Baggage	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
CDA Office	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Delta Baggage Office	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Women's Restroom	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Men's Restroom	Ceiling Loudspeakers		Atlas	C803A	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Baggage Claim East	Ceiling Loudspeakers		Atlas	C803A	10
	Loudspeaker Transformer		Atlas	HT87	10
	Loudspeaker Baffle		Atlas	FA51-8	10
	Loudspeaker Back box		Atlas	96-8-7	10
Baggage Claim West	Ceiling Loudspeakers		Atlas	C803A	10
	Loudspeaker Transformer		Atlas	HT87	10
	Loudspeaker Baffle		Atlas	FA51-8	10
	Loudspeaker Back box		Atlas	96-8-7	10
Vestibule 2E	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 2C	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 2A	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	2

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	16
Terminal 2, EF Apex, Upper Level					
Red Carpet Club	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2
	Loudspeaker Baffle		Atlas	FA51-8	2
	Loudspeaker Back box		Atlas	96-8-7	2
	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
Delta Club	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
ADA Restroom	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	1
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	4
Terminal 2, E Finger, Apron Level					
TSA Testing Center	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Terminal 2, F Finger, Apron Level					

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
Men's Restroom	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Women's Restroom	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Terminal 2, Mezzanine Level					
TSA Offices	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2
	Loudspeaker Baffle		Atlas	FA51-8	2
	Loudspeaker Back box		Atlas	96-8-7	2
Red Carpet Club	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2
	Loudspeaker Baffle		Atlas	FA51-8	2
	Loudspeaker Back box		Atlas	96-8-7	2
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	2
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	16
Terminal 2, Upper Level					
Family Toilet	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2
	Loudspeaker Baffle		Atlas	FA51-8	2

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Loudspeaker Back box		Atlas	96-8-7	2
Medical Office	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2
	Loudspeaker Baffle		Atlas	FA51-8	2
	Loudspeaker Back box		Atlas	96-8-7	2
Travelers Aid	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2
	Loudspeaker Baffle		Atlas	FA51-8	2
	Loudspeaker Back box		Atlas	96-8-7	2
Attendant Office	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
TSA Checkpoint Office	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Security Checkpoint #5	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2
	Loudspeaker Baffle		Atlas	FA51-8	2
	Loudspeaker Back box		Atlas	96-8-7	2
Vestibule 2A (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 2B	Ceiling Loudspeakers		Atlas	C803A	

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Loudspeaker Transformer		Atlas	HT87	
	Loudspeaker Baffle		Atlas	FA51-8	
	Loudspeaker Back box		Atlas	96-8-7	
Vestibule 2C (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 2D	Ceiling Loudspeakers		Atlas	C803A	
	Loudspeaker Transformer		Atlas	HT87	
	Loudspeaker Baffle		Atlas	FA51-8	
	Loudspeaker Back box		Atlas	96-8-7	
Vestibule 2E (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Security Checkpoint #4A	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Security Checkpoint #4B	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	2

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	16
Terminal 3, Lower Level					
Vestibule 3A (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 3D (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 3E (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 3G (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 3H (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
AA Baggage Room/Service Counter	Ceiling Loudspeakers		Atlas	C803A	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
AA Baggage Claim Area	Ceiling Loudspeakers		Atlas	C803A	9
	Loudspeaker Transformer		Atlas	HT87	9
	Loudspeaker Baffle		Atlas	FA51-8	9
	Loudspeaker Back box		Atlas	96-8-7	9
Multiple Carriers Room/ Service Counter	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Multiple Carriers Baggage Claim	Ceiling Loudspeakers		Atlas	C803A	5
	Loudspeaker Transformer		Atlas	HT87	5
	Loudspeaker Baffle		Atlas	FA51-8	5
	Loudspeaker Back box		Atlas	96-8-7	5
CDA Office	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	2
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	16
Terminal 3, Penthouse Level, Concourses H and K					

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
Admirals Club	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2 2
	Loudspeaker Baffle		Atlas	FA51-8	2
	Loudspeaker Back box		Atlas	96-8-7	2
	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
Terminal 3, Upper Level					
Vestibule 3B (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 3C	Ceiling Loudspeakers		Atlas	C803A	
	Loudspeaker Transformer		Atlas	HT87	
	Loudspeaker Baffle		Atlas	FA51-8	
	Loudspeaker Back box		Atlas	96-8-7	
Vestibule 3D (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 3E	Ceiling Loudspeakers		Atlas	C803A	
	Loudspeaker Transformer		Atlas	HT87	
	Loudspeaker Baffle		Atlas	FA51-8	
	Loudspeaker Back box		Atlas	96-8-7	
Vestibule 3F (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
Vestibule 3G	Ceiling Loudspeakers		Atlas	C803A	
	Loudspeaker Transformer		Atlas	HT87	
	Loudspeaker Baffle		Atlas	FA51-8	
	Loudspeaker Back box		Atlas	96-8-7	
Vestibule 3H (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 3J	Ceiling Loudspeakers		Atlas	C803A	
	Loudspeaker Transformer		Atlas	HT87	
	Loudspeaker Baffle		Atlas	FA51-8	
	Loudspeaker Back box		Atlas	96-8-7	
Vestibule 3K (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Security Checkpoint 6	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Security Checkpoint 6A	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Security Checkpoint 7	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back ox		Atlas	96-8-7	1
Security Checkpoint 7A	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Security Checkpoint 9	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	2
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	16
Terminal 3, Upper Level					
Admirals Club	Ceiling Loudspeakers		Atlas	C803A	10
	Loudspeaker Transformer		Atlas	HT87	10
	Loudspeaker Baffle		Atlas	FA51-8	10
	Loudspeaker Back box		Atlas	96-8-7	10
	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
	Amplifier		Crown		1
AA Flagship Lounge	Ceiling Loudspeakers		Atlas	C803A	5
	Loudspeaker Transformer		Atlas	HT87	5 1
	Loudspeaker Baffle		Atlas	FA51-8	5
	Loudspeaker Back box		Atlas	96-8-7	5

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
	Amplifier		Crown		1
Women's Restroom, Concourse H	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2
	Loudspeaker Baffle		Atlas	FA51-8	2
	Loudspeaker Back box		Atlas	96-8-7	2
Terminal 3, Mezzanine Level					
TSA Offices	Ceiling Loudspeakers		Atlas	C803A	8
	Loudspeaker Transformer		Atlas	HT87	8
	Loudspeaker Baffle		Atlas	FA51-8	8
	Loudspeaker Back box		Atlas	96-8-7	8
Terminal 5, Apron Level					
ATS Station	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Terminal 5, Mezzanine Level					
TSA Offices	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2
	Loudspeaker Baffle		Atlas	FA51-8	2
	Loudspeaker Back box		Atlas	96-8-7	2
Terminal 5, Upper Level					
Security Checkpoint 10 (Current)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
	Loudspeaker Transformer		Atlas	HT87	11
Security Checkpoint 10 (Future)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Baffle		Atlas	FA51-8	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Loudspeaker Back box		Atlas	96-8-7	1
	Loudspeaker Transformer		Atlas	HT87	1
Vestibule 5D (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Vestibule 5E (Outdoor)	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
Alitalia Lounge	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
	Amplifier		TBD		1
British Lounge	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
Aer lingus Lounge	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
JAL Lounge	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1 1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
	Amplifier		TBD		1
Korean Lounge	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
Air France Lounge	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
CTA Pedestrian Corridor					
Ped Tunnels	Ceiling Loudspeakers		Atlas	C803A	30
	Loudspeaker Transformer		Atlas	HT87	30
	Loudspeaker Baffle		Atlas	FA51-8	30
	Loudspeaker Back box		Atlas	96-8-7	30
	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	2
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	16
TSA Offices	Ceiling Loudspeakers		Atlas	C803A	1
	Loudspeaker Transformer		Atlas	HT87	1
	Loudspeaker Baffle		Atlas	FA51-8	1
	Loudspeaker Back box		Atlas	96-8-7	1
ATS Stations					
Terminal 1	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
Terminal 2	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
Terminal 3	Networked Audio Output	Converts PA System Digital Audio to Analog	Biamp	VO-4	1
Terminal 1 and Link	Ceiling Loudspeakers		Atlas	C803A	3
Terminal 2 and Link	Ceiling Loudspeakers		Atlas	C803A	3
Terminal 3 and Link	Ceiling Loudspeakers		Atlas	C803A	3
Terminal 5 and Link	Ceiling Loudspeakers		Atlas	C803A	3
Rotunda and Concourse G					
Women's Restrooms	Ceiling Loudspeakers		Atlas	C803A	3

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Loudspeaker Transformer		Atlas	HT87	3
	Loudspeaker Baffle		Atlas	FA51-8	3
	Loudspeaker Back box		Atlas	96-8-7	3
Men's Restrooms	Ceiling Loudspeakers		Atlas	C803A	3
	Loudspeaker Transformer		Atlas	HT87	3
	Loudspeaker Baffle		Atlas	FA51-8	3
	Loudspeaker Back box		Atlas	96-8-7	3
Admirals Club	Ceiling Loudspeakers		Atlas	C803A	2
	Loudspeaker Transformer		Atlas	HT87	2
	Loudspeaker Baffle		Atlas	FA51-8	2
	Loudspeaker Back box		Atlas	96-8-7	2
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	2
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	16
Exterior Parking Structure					
Elevator Bank 1 (6 Levels Typ.)	Ceiling Loudspeakers		Atlas	C803A	6
	Loudspeaker Baffle		Atlas	FA51-8	6
	Loudspeaker Back box		Atlas	96-8-7	6
	Loudspeaker Transformer		Atlas	HT87	6
Elevator Bank 2	Ceiling Loudspeakers		Atlas	C803A	6
	Loudspeaker Baffle		Atlas	FA51-8	6
	Loudspeaker Back box		Atlas	96-8-7	6
	Loudspeaker Transformer		Atlas	HT87	6
Elevator Bank 3	Ceiling Loudspeakers		Atlas	C803A	6

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Loudspeaker Baffle		Atlas	FA51-8	6
	Loudspeaker Back box		Atlas	96-8-7	6
	Loudspeaker Transformer		Atlas	HT87	6
Elevator Bank 4	Ceiling Loudspeakers		Atlas	C803A	6
	Loudspeaker Baffle		Atlas	FA51-8	6
	Loudspeaker Back box		Atlas	96-8-7	6
	Loudspeaker Transformer		Atlas	HT87	6
Elevator Bank 5	Ceiling Loudspeakers		Atlas	C803A	6
	Loudspeaker Baffle		Atlas	FA51-8	6
	Loudspeaker Back box		Atlas	96-8-7	6
	Loudspeaker Transformer		Atlas	HT87	6
Elevator Bank 6	Ceiling Loudspeakers		Atlas	C803A	6
	Loudspeaker Baffle		Atlas	FA51-8	6
	Loudspeaker Back box		Atlas	96-8-7	6
	Loudspeaker Transformer		Atlas	HT87	6
Bus Shuttle Center	Ceiling Loudspeakers		Atlas	C803A	3
	Loudspeaker Transformer		Atlas	HT87	3
	Loudspeaker Baffle		Atlas	FA51-8	3
	Loudspeaker Back box		Atlas	96-8-7	3
Additional Head-End Equipment	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp	VA-8600	10
	Amplifier Cards	Amplifier module card, selectable 100 - 600 W, selectable low impedance (4, 6, 8 ohms) or constant voltage output (70V or 100V)	Biamp	AM-600	52
Exterior Parking Structure					
Level 1	Horn Loudspeaker		Atlas	AP-15T	4

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
Level 2	Horn Loudspeaker		Atlas	AP-15T	4
Level 3	Horn Loudspeaker		Atlas	AP-15T	4
Level 4	Horn Loudspeaker		Atlas	AP-15T	4
Level 5	Horn Loudspeaker		Atlas	AP-15T	4
Level 6	Horn Loudspeaker		Atlas	AP-15T	4
Parking Lots B & C					
	Omni-Directional Speaker Array		Federal Signal	DSA	1
	UHF Radio	2-Way UHF Radio	Federal Signal	UVTDU	1
	Amplifier	400W Amp	Federal Signal	UV400	1
	Antenna		Federal Signal	OMNI-4	1
	Antenna Mounting Bracket		Federal Signal	AMB-p	1
	Digital Voice Storage Card		Federal Signal	DVSD	1
	Mounting Pole	50 ft high steel pole	Federal Signal	TK-PO-GALDPOL2	1
	LED Obstruction Light	Red	Federal Signal	POL-21004-1F-R-34B-S	1
	Rotating LED Light	Amber	Federal Signal	371 LED-120A	1
Parking Lot D					
	Omni-Directional Speaker Array		Federal Signal	DSA	1
	UHF Radio	2-Way UHF Radio	Federal Signal	UVTDU	1
	Amplifier	400W Amp	Federal Signal	UV400	1
	Antenna		Federal Signal	OMNI-4	1
	Antenna Mounting Bracket		Federal Signal	AMB-p	1
	Digital Voice Storage Card		Federal Signal	DVSD	1
	Mounting Pole	50 ft high steel pole	Federal Signal	TK-PO-GALDPOL2	1
	LED Obstruction Light	Red	Federal Signal	POL-21004-1F-R-34B-S	1
	Rotating LED Light	Amber	Federal Signal	371 LED-120A	1
Parking Lot E					
	Omni-Directional		Federal Signal	DSA	2

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Speaker Array				
	UHF Radio	2-Way UHF Radio	Federal Signal	UVTDU	2
	Amplifier	400W Amp	Federal Signal	UV400	2
	Antenna		Federal Signal	OMNI-4	2
	Antenna Mounting Bracket		Federal Signal	AMB-p	2
	Digital Voice Storage Card		Federal Signal	DVSD	2
	Mounting Pole	50 ft high steel pole	Federal Signal	TK-PO-GALDPOL2	2
	LED Obstruction Light	Red	Federal Signal	POL-21004-1F-R-34B-S	2
	Rotating LED Light	Amber	Federal Signal	371 LED-120A	2
Parking Lot F					
	Omni-Directional Speaker Array		Federal Signal	DSA	1
	UHF Radio	2-Way UHF Radio	Federal Signal	UVTDU	1
	Amplifier	400W Amp	Federal Signal	UV400	1
	Antenna		Federal Signal	OMNI-4	1
	Antenna Mounting Bracket		Federal Signal	AMB-p	1
	Digital Voice Storage Card		Federal Signal	DVSD	1
	Mounting Pole	50 ft high steel pole	Federal Signal	TK-PO-GALDPOL2	1
	LED Obstruction Light	Red	Federal Signal	POL-21004-1F-R-34B-S	1
	Rotating LED Light	Amber	Federal Signal	371 LED-120A	1
Parking Lot G					
	Omni-Directional Speaker Array		Federal Signal	DSA	1
	UHF Radio	2-Way UHF Radio	Federal Signal	UVTDU	1
	Amplifier	400W Amp	Federal Signal	UV400	1
	Antenna		Federal Signal	OMNI-4	1
	Antenna Mounting Bracket		Federal Signal	AMB-p	1
	Digital Voice		Federal Signal	DVSD	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	Storage Card				
	Mounting Pole	50 ft high steel pole	Federal Signal	TK-PO-GALDPOL2	1
	LED Obstruction Light	Red	Federal Signal	POL-21004-1F-R-34B-S	1
	Rotating LED Light	Amber	Federal Signal	371 LED-120A	1
CVHA & Car Rental Lot					
	Omni-Directional Speaker Array		Federal Signal	DSA	2
	UHF Radio	2-Way UHF Radio	Federal Signal	UVTDU	2
	Amplifier	400W Amp	Federal Signal	UV400	2
	Antenna		Federal Signal	OMNI-4	2
	Antenna Mounting Bracket		Federal Signal	AMB-p	2
	Digital Voice Storage Card		Federal Signal	DVSD	2
	Mounting Pole	50 ft high steel pole	Federal Signal	TK-PO-GALDPOL2	2
	LED Obstruction Light	Red	Federal Signal	POL-21004-1F-R-34B-S	2
	Rotating LED Light	Amber	Federal Signal	371 LED-120A	2
TSA Lot					
	Omni-Directional Speaker Array		Federal Signal	DSA	1
	UHF Radio	2-Way UHF Radio	Federal Signal	UVTDU	1
	Amplifier	400W Amp	Federal Signal	UV400	1
	Antenna		Federal Signal	OMNI-4	1
	Antenna Mounting Bracket		Federal Signal	AMB-p	1
	Digital Voice Storage Card		Federal Signal	DVSD	1
	Mounting Pole	50 ft high steel pole	Federal Signal	TK-PO-GALDPOL2	1
	LED Obstruction Light	Red	Federal Signal	POL-21004-1F-R-34B-S	1
	Rotating LED Light	Amber	Federal Signal	371 LED-120A	1
Suburban Cab Lot					
	Omni-Directional Speaker Array		Federal Signal	DSA	1

System & Location	Device Type	Description	Basis of Design Make	Basis of Design Model	CDA Est Qty
	UHF Radio	2-Way UHF Radio	Federal Signal	UVTDU	1
	Amplifier	400W Amp	Federal Signal	UV400	1
	Antenna		Federal Signal	OMNI-4	1
	Antenna Mounting Bracket		Federal Signal	AMB-p	1
	Digital Voice Storage Card		Federal Signal	DVSD	1
	Mounting Pole	50 ft high steel pole	Federal Signal	TK-PO-GALDPOL2	1
	LED Obstruction Light	Red	Federal Signal	POL-21004-1F-R-34B-S	1
	Rotating LED Light	Amber	Federal Signal	371 LED-120A	1
	Push to talk Microphone	New Push to talk microphone to replace system paging station microphone	Shure	514B	

Existing Speaker Listing (Partial Field Survey)

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Lower Level/1	LL	1A /Vestibule	105"	Gyp.Bd	ceiling mtd	
Lower Level/1	LL	1B /Vestibule	105"	Gyp.Bd	ceiling mtd	
Lower Level/1	LL	1C /Vestibule	105"	Gyp.Bd	ceiling mtd	
Lower Level/1	LL	1D /Vestibule	105"	Gyp.Bd	ceiling mtd	
Lower Level/1	LL	1E /Vestibule	105"	Gyp.Bd	ceiling mtd	
Lower Level/1	LL	1F /Vestibule	105"	Gyp.Bd	ceiling mtd	
Lower Level/1	LL	1G /Vestibule	105"	Gyp.Bd	ceiling mtd	
Lower Level/1	LL	Bag claim/West	varies	Metal Grid	-	
Lower Level/1	LL	Bag claim/East	varies	Metal Grid	-	
Lower Level/1	LL	Men's (Col 85)	105"	Gyp.Bd	ceiling mtd	
Lower Level/1	LL	Women's (Col 85)	96"	Gyp.Bd	ceiling mtd	
Lower Level/1	LL	Office	105"	Metal Grid	-	
Lower Level/1 United Airlines Concourse B	LL					United Airlines has own PA system and it is not tied into general system only for special circumstances are announcements made
Red Carpet Club	LL	Rec. Desk	96"	Gyp.Bd	Recessed	United Airlines has own PA system and it is not tied into general system only for special circumstances are announcements made
Red Carpet Club	LL	Kitchen	100"	ACT	Recessed	United Airlines has own PA system and it is not tied into general system only for special circumstances are announcements made
Red Carpet Club	LL	Executive Area	110"	Metal Panels	Recessed	United Airlines has own PA system and it is not tied into general system only for special circumstances are announcements made

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Red Carpet Club	LL	Wome n's	99"	Gyp.Bd	Recessed	United Airlines has own PA system and it is not tied into general system only for special circumstances are announcements made
Red Carpet Club	LL	Men's	99"	Gyp.Bd	Recessed	United Airlines has own PA system and it is not tied into general system only for special circumstances are announcements made
Upper Level / 1	UL	1A	105"	Gyp.Bd	ceiling mtd	
Upper Level / 1	UL	1B	105"	Gyp.Bd	ceiling mtd	
Upper Level / 1	UL	1C	105"	Gyp.Bd	ceiling mtd	
Upper Level / 1	UL	1Da	105"	Gyp.Bd	-	
Upper Level / 1	UL	1Db	105"	Gyp.Bd	-	
Upper Level / 1	UL	1E	105"	Gyp.Bd	ceiling mtd	
Upper Level / 1	UL	1F	105"	Gyp.Bd	ceiling mtd	
Upper Level / 1	UL	1G	105"	Gyp.Bd	ceiling mtd	
Upper Level / 1	UP	Men's / 1 (COL 78)	105"	Gyp.Bd	Recessed	
Upper Level / 1	UP	Women's/ 1 (COL 78)	105"	Gyp.Bd	Recessed	Assumed same as men's
Upper Level / 1	UP	Men's / 1 (COL 76)	105"	Gyp.Bd	Recessed	
Upper Level / 1	UP	Women's/ 1 (COL 76)	105"	Gyp.Bd	Recessed	Assumed same as men's
Upper Level/1 Conc B	UP	Women's (COL 65)	96"	Gyp. Bd	Recessed	
Upper Level/1 Conc B	UP	Men (COL 65)	96"	Gyp. Bd	Recessed	
Upper Level/1 Conc B	UP	Check Point #3	291"	Exposed/Metal	Ceiling Mounted	Dimension is to underside of loudspeaker
Upper Level/1 Conc B	UP	United Red Carpet Club	116"	ACT	Recessed	
Upper Level/1 Conc B	UP	Women's (Col 75)	96"	Gyp. Bd	Recessed	
Upper Level/1 Conc B	UP	Men's (Col 75)	96"	Gyp. Bd	Recessed	

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Upper Level/1 Conc B	UP	Check Point #2	292"	Exposed/Metal	Ceiling Mounted	
Upper Level/1 Conc B	UP	Check Point #1	292"	Exposed/Metal	Ceiling Mounted	
Upper Level/1 Conc B	UP	Women's (COL 97)	96"/114"	Gyp. Bd	Recessed	Working
Upper Level/1 Conc B	UP	Men's (COL 97)	96"/114"	Gyp. Bd	Recessed	Working
Upper Level/1 Conc B	UP	TSA Office	112"	ACT	N/A	No loudspeakers installed
Upper Level/1 Conc B	UP	Women's (COL 112)	Varies (140")	GWB/Metal	N/A	No loudspeakers visible but paging is audible
Upper Level/1 Conc B	UP	Men's (COL 112)	Varies (140")	GWB/Metal	N/A	No loudspeakers visible but paging is audible
Upper Level/1 Conc B	UP	United Red Carpet Club	107"	Gyp. Bd	N/A	No loudspeakers in vestibule
Upper Level/1 Conc B	UP	Women's (COL 115)	102"	Gyp. Bd	-	Working
Upper Level/1 Conc B	UP	Men's (COL 115)	102"	Gyp. Bd	-	Working
Upper Level/1 Conc B	UP	Chilli's	111"	ACT	-	
Upper Level/1 Conc B	UP	Women's (COL 95)	102"	Gyp. Bd	-	
Upper Level/1 Conc B	UP	Men's (COL 95)	102"	Gyp. Bd	-	
Upper Level/1 Conc C	UP	Women's (COL 8)	110"	GWB/Metal	N/A	No loudspeakers visible
Upper Level/1 Conc C	UP	Men (COL 8)	110"	GWB/Metal	N/A	No loudspeakers visible
Upper Level/1 Conc C	UP	Women's (COL 16)	112"	GWB/Metal	N/A	Speaker only by entrance
Upper Level/1 Conc C	UP	Men (COL 16)	112"	GWB/Metal	N/A	Speaker only by entrance

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Upper Level/1 Conc C	UP	United Red Carpet Club	Varies	Perforated Metal Ceiling	N/A	Perforated metal ceiling but no loudspeakers are visible. It is just a gate for United passengers (not lounge). Sloped ceiling
Upper Level/1 Conc C	UP	Women's (COL 23)	105"	Gyp. Bd	-	Working
Upper Level/1 Conc C	UP	Men (COL 23)	105"	Gyp. Bd	-	Working
Upper Level/1 Conc C	UP	Women's (COL 31)	100"	Gyp. Bd	-	Working
Upper Level/1 Conc C	UP	Women's (COL 36)	108"	Gyp. Bd	-	Working
Upper Level/1 Conc C	UP	Men's (COL 36)	108"	Gyp. Bd	-	Working
Upper Level/1 Conc C	UP	Women's (COL 44)	Varies (150"Max")	Varies	N/A	No loudspeakers visible
Upper Level/1 Conc C	UP	Men's (COL 44)	Varies (150"Max")	Varies	N/A	No loudspeakers visible
Mezzanine / 1 United Airlines Concourse B	Mezz		180"	Metal Siding	Surface mounted	General Areas are on sloped ceiling
Red Carpet Club	Mezz	Conf. A	96"	ACT	Recessed	
Red Carpet Club	Mezz	Conf. B	96"	ACT	Recessed	
Red Carpet Club	Mezz	Conf. C	96"	ACT	Recessed	
Red Carpet Club	Mezz	Conf. D	96"	ACT	Recessed	
Red Carpet Club	Mezz	Storag e	96"	ACT	Recessed	
Red Carpet Club	Mezz	Wome n's	90"	Gyp.Bd	Recessed	
Red Carpet Club	Mezz	Men's	90"	Gyp.Bd	Recessed	
Red Carpet Club	Mezz	Rear Rooms	-	-	-	Several rooms adjacent to conference rooms were not accessible
B & C Pedestrian Tunnel	Tunnel	Pedestrian	154"	Metal Grid	Recessed	
Upper Level/2	UL	2A/Vestibul e	8'-1" to 9'-11"	glass	-	

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Upper Level/2	UL	2B/Vestibule	8'-1" to 9'-11"	glass	-	
Upper Level/2	UL	2C/Vestibule	8'-1" to 9'-11"	glass	-	
Upper Level/2	UL	2D/Vestibule	8'-1" to 9'-11"	glass	-	
Upper Level/2	UL	2E/Vestibule	8'-1" to 9'-11"	glass	-	
Lower Level/2	LL	Baggage UA, CDA Delta	9'-0"	2x4 metal grid tiles	-	
Lower Level/2	LL	Delta - Baggage	8'-10"	2x4 susp acc tiles	-	
Lower Level/2	LL	United-Baggage	9'-3"	2x4 metal grid tiles	-	
Lower Level/2	LL	2A/Vestibule	7'-11 to 8'-11"	glass	-	
Lower Level/2	LL	2C/Vestibule	7'-11 to 8'-11"	glass	-	
Lower Level/2	LL	2E/Vestibule	7'-11 to 8'-11"	glass	-	
Lower Level/2	LL	CDA	11'-11"	2x2 susp. Acc. Tile	-	
Lower Level/2	LL	UA Airways	11'-11"	2x2 susp. Acc. Tile	-	
Lower Level/2	LL	United Airlines	9'-0"	2x2 susp. Acc. Tile	-	
Lower Level/2	LL	Women's (COL 4L)	8'-11"	Drywall	6" recessed	
Lower Level/2	LL	Men's (COL 4L)	8'-11"	Drywall	6" recessed	
Upper Level/2	UL	Men's (COL 4X)	8'-11"	Drywall	6" recessed	
Upper Level/2	UL	Women's (COL 4X)	8'-11"	Drywall	6" recessed	
Upper Level/2	UL	Medical Office	8'-11"	2x4 susp. Acc. Tile	-	
Upper Level/2	UL	Travelers Aid	8'-11"	2x4 susp. Acc. Tile	-	
Upper Level/2	UL	TSA (COL 4P)	8'-11"	2x2 susp. Acc. Tile	*	* Large box type loudspeaker 3'x3'
Upper Level/2	UL	TSA (COL 4O)	No Ceiling	N/A	*	* Large box type loudspeaker 3'x3'
Upper Level/2	UL	Checkpoint 5	22'-1"	2x4 metal diffuser grid	-	
Upper Level/2	UL	Men's (COL 4L south)	8'-11"	Drywall	6" recessed	
Upper Level/2	UL	Women's (COL 4O)	8'-11"	Drywall	6" recessed	
Upper Level/2	UL	Men's (COL 4L north)	8'-11"	Drywall	6" recessed	
Upper Level/2	UL	Women's (COL 4K)	8'-11"	Drywall	6" recessed	

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Upper Level/2	UL	Checkpoint 4B Vendors	8'-7"	2x2 susp. Acc. Tile	-	
Upper Level/2	UL	Checkpoint 4A	22'-1"	2x4 metal diffuser grid	-	* Large box type loudspeaker 3'x3'
Upper Level/2	UL	Men's (COL 19)	8'-0"	Drywall	6" recessed	
Upper Level/2	UL	Women's (COL 17)	8'-0"	Drywall	6" recessed	Loudspeakers are for tenant music only
Upper Level/2	UL	Family Toilet (COL 5M)	7'-8"	Drywall	-	
Upper Level/2	UL	Men's (COL 5M)	8'-0"	Drywall	6" recessed	Loudspeakers are for the airline and independent of the loudspeakers in the main corridor
Upper Level/2	UL	Women's (COL 5L)	8'-0"	Drywall	6" recessed	Loudspeakers are for the airline and independent of the loudspeakers in the main corridor
Upper Level/2	UL	Men's (COL 53)	8'-0"	Drywall	6" recessed	
Upper Level/ 2 Upper Level/ 2 Delta Airlines	UL UL	Women's (COL 53)	8'-0"	Drywall	6" recessed	
Delta Club	UL	Corridor at Entry	9'-6"	Drywall	8" recessed	Delta Club has an internal loudspeaker ind. Of airport loudspeakers
Delta Club	UL	Main Area	9'-6"	Drywall	8" recessed	Delta Club has an internal loudspeaker ind. Of airport loudspeakers
Delta Club	UL	Business Center	7'-11"	Drywall	8" recessed	Delta Club has an internal loudspeaker ind. Of airport loudspeakers
Delta Club	UL	Men's Toilet	8'-0"	Drywall	8" recessed	Delta Club has an internal loudspeaker ind. Of airport loudspeakers
Delta Club	UL	Rear Seating Area	7'-11" to 9'-2"	Drywall at multiple heights	8" recessed	Delta Club has an internal loudspeaker ind. Of airport loudspeakers

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Upper Level/2 United Red Carpet	UL	Entrance	8'-9"	Drywall	-	
Upper Level/2 United Red Carpet	Mezz	Waiting Area	Varies between 8'-1" and 10'-6"	Varies between drwall and curved wood ceiling panels	-	
Concourse F Apron Level/2	Apron	Men's (COL 64)	7'-10"	drywall	-	
Concourse F Apron Level/2	Apron	Women's (COL 64)	7'-10"	drywall	-	
Concourse E Apron Level/2	Apron	TSA testing center	8'-0"	2x2 sus. Acc. Tile	-	
Mezzanin e/2	Mezz	TSA offices #1	9'-0"	2x2 sus. Acc. Tile	-	
Mezzanin e/2	Mezz	TSA offices #2	9'-0"	2x2 sus. Acc. Tile	-	
Lower Level/3	LL	CDA	194"	Concrete	N/A	No loudspeaker system is installed
Lower Level/3	LL	Multiple Carriers	111"	Metal Grid	N/A	No loudspeaker system is installed
Lower Level/3	LL	Women's (COL 8Y)	108"	Gyp. Bd	Recessed	Working
Lower Level/3	LL	Family (COL 8Y)	108"	Gyp. Bd	Recessed	Working
Lower Level/3	LL	Men (COL 8Y)	108"	Gyp. Bd	Recessed	Working
Lower Level/3	LL	American Airlines	111"	Metal Grid	N/A	No loudspeaker system is installed
Lower Level/3	LL	Women's (COL 8O)	108"	Gyp. Bd	Recessed	Working
Lower Level/3	LL	Family (COL 8Y)	108"	Gyp. Bd	Recessed	Working
Lower Level/3	LL	Men (COL 8Y)	108"	Gyp. Bd	Recessed	Working
Lower level/3	LL	American Eagle	111"	Metal Grid	N/A	No loudspeaker system is installed
Lower Level/3	LL	3H/Vestibul e	96"	Glass	N/A	No loudspeaker system is installed
Lower Level/3	LL	3G/Vestibul e	96"	Glass	N/A	No loudspeaker system is installed
Lower Level/3	LL	3E/Vestibul e	96"	Glass	N/A	No loudspeaker system is installed
Lower Level/3	LL	3D/Vestibul e	96"	Glass	N/A	No loudspeaker system is installed
Lower Level/3	LL	3A/Vestibul e	96"	Glass	N/A	No loudspeaker system is installed

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Lower Level/3	LL	AA Holding Room (COL 8Y)	-	-	-	No Access(Door #401A)
Lower Level/3	LL	AA (COL 8F)	108"	ACT	N/A	No loudspeaker system is installed
Lower Level/3	LL	American Eagle (COL 8L)	-	-	N/A	No loudspeakers
Upper Level/3	UL	Check Point #9 (COL 8II)	280"	Metal ceiling	Surface Mounted	204" to edge of loudspeaker but it is in open area. Loudspeakers in this area do not seem to be working.
Upper Level/3	UL	Family bathrooms (2) (COL 8BB)	103"	GWB	Recessed	
Upper Level/3	UL	Check Point # 8	280"	Exposed Ceiling	Surface Mounted	Loudspeakers tied into existing general PA system. Perfectly clear
Upper Level/3	UL	Women's (COL 8II)	104"	Gyp. Bd	Recessed	Working
Upper Level/3	UL	Men's (COL 8FF)	104"	Gyp. Bd	Recessed	Working
Upper Level/3	UL	Women's (COL 8X)	104"	Gyp. Bd	Recessed	Working
Upper Level/3	UL	Men's (COL 8X)	104"	Gyp. Bd	Recessed	Working
Upper Level/3	UL	Check Point # 7/A	110"	Metal ceiling	N/A	Cannot hear anything
Upper Level/3	UL	Women's (COL 8O)	104"	Gyp. Bd	Recessed	Working
Upper Level/3	UL	Men's (COL 8O)	108"	Gyp. Bd	Recessed	Working
Upper Level/3	UL	Women's (COL 8L)	108"	Gyp. Bd	Recessed	Working
Upper Level/3	UL	Men's (COL 8L)	104"	Gyp. Bd	Recessed	Working
Upper Level/3	UL	Check Point # 7	280"/111"	Exposed/Metal ceiling	N/A	Two ceiling heights. Lower one with metal ceiling does not have loudspeakers.
Upper Level/3	UL	Check Point # 6A	107"	ACT	N/A	No existing loudspeakers
Upper Level/3	UL	TSA Office	107"	ACT	N/A	No existing loudspeakers
Upper Level/3	UL	Check Point # 6	267"/112"/262"	Glass/Exposed ceiling	N/A	Three loudspeaker/ceiling heights.
Upper Level/3	UL	3K/Vestibule	96"	Glass	N/A	No existing loudspeakers
Upper Level/3	UL	3J/Vestibule	96"	Glass	N/A	No existing loudspeakers

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Upper Level/3	UL	3H/Vestibule	96"	Glass	N/A	No existing loudspeakers
Upper Level/3	UL	3G/Vestibule	96"	Glass	N/A	No existing loudspeakers
Upper Level/3	UL	3F/Vestibule	96"	Glass	N/A	No existing loudspeakers
Upper Level/3	UL	3E/Vestibule	96"	Glass	N/A	No existing loudspeakers
Upper Level/3	UL	3D/Vestibule	96"	Glass	N/A	No existing loudspeakers
Upper Level/3	UL	3C/Vestibule	96"	Glass	N/A	No existing loudspeakers
Upper Level/3	UL	3B/Vestibule	96"	Glass	N/A	No existing loudspeakers
Upper Level/3	UL	3A/Vestibule	96"	Glass	Surface Mounted	Speaker attached above sliding doors
Upper Level/Conc H-K Stem	UL	Women's (COL 12)	113"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc H-K Stem	UL	Men's (COL 12)	113"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc H	UL	Men's (COL 31)	103"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc H	UL	Women's (COL 31)	103"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc H	UL	Women's (COL 43)	103"	GWB	N/A	No existing loudspeakers based on cleaning lady.
Upper Level/Conc H	UL	Women's (COL 54)	98"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc H	UL	Men's (COL 54)	98"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc H	UL	Men's (COL 64)	98"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc H	UL	Women's (COL 63)	98"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc H	UL	AA Admirals Club	106"	ACT	N/A	Admirals club has their own PA system but does not get the announcements from the general PA system. They do not want it either
Upper Level/Conc H	UL	Men's (COL 90)	100"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc H	UL	Women's (COL 90)	100"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc K	UL	Women's (COL 47)	100"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc K	UL	Men's (COL 47)	100"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc K	UL	Men's (COL 59)	99"	GWB	Recessed	Loudspeakers are working
Upper Level/Conc K	UL	Women's (COL 59)	99"	GWB	Recessed	Loudspeakers are working

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Upper Level/Conc K	UL	Men's (COL 72)	99"	GWB	Recessed	Loudspeakers are working but very faint
Upper Level/Conc K	UL	Women's (COL 72)	99"	GWB	Recessed	Loudspeakers are working but very faint
Upper Level/Conc K	UL	Men's (COL 76)	99"	GWB	Recessed	Loudspeakers are working but very faint
Upper Level/Conc K	UL	Women's (COL 76)	99"	GWB	Recessed	Loudspeakers are working but very faint
Upper Level/Conc K	UL	AA Flagship Lounge	Varies (max 150")	GWB	Recessed	Lounge has their own PA system but does not get the announcements from the general PA system.
Upper Level/Conc L	UL	Men's (COL 21)	96"	GWB	Recessed	Loudspeakers are working but very faint
Upper Level/Conc L	UL	Women's (COL 21)	96"	GWB	Recessed	Loudspeakers are working but very faint
Upper Level/Conc L	UL	Men's (COL 36)	102"	GWB	Recessed	Loudspeakers are working but very faint
Upper Level/Conc L	UL	Women's (COL 36)	102"	GWB	Recessed	Loudspeakers are working but very faint
Penthouse/3	PH	AA Admiral Club	120" (varies)	Metal/ACT/GWB/Panels	Recessed/Hidden	
Mezzanine/3	Mezz	TSA Offices (8DD)	105"	ACT	N/A	No system in installed
Baggage Level/5	BL	5B	105"	EGGCRATE	ceiling mtd	
Baggage Level/5	BL	5C	105"	EGGCRATE	ceiling mtd	
Baggage Level/5	BL	5D	105"	EGGCRATE	ceiling mtd	
Baggage Level/5	BL	5E	105"	EGGCRATE	ceiling mtd	
Baggage Level/5	BL	Men's/West	105"	Gyp.Bd	Recessed	
Baggage Level/5	BL	Women's/West	105"	Gyp.Bd	Recessed	Assumed same as Men's
Baggage Level/5	BL	Men's/East	105"	Gyp.Bd	Recessed	
Baggage Level/5	BL	Women's/East	105"	Gyp.Bd	Recessed	Assumed same as Men's
Baggage Level/5	BL	CBR Tenant Space	114"	-	-	
Baggage Level/5	BL	Baggage Area	112" - 140" - 160"	-	-	
Baggage Level/5	BL	Men's (COL 56)	105"	Gyp.Bd	Recessed	
Baggage Level/5	BL	Women's (COL 56)	105"	Gyp.Bd	Recessed	Assumed same as Men's
Baggage Level/5	BL	Men's (COL 77)	105"	Gyp.Bd	Recessed	
Baggage Level/5	BL	Women's (COL 77)	105"	Gyp.Bd	Recessed	Assumed same as Men's
Mezzanine	Mezz	TSA Offices	102"	ACT	Recessed	Could not access one of the rooms in this area.

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Upper Level 5	UL	5A	105"	EGGCRATE	ceiling mtd	
Upper Level 5	UL	5B	105"	EGGCRATE	ceiling mtd	
Upper Level 5	UL	5C	105"	EGGCRATE	ceiling mtd	
Upper Level 5	UL	5D	105"	EGGCRATE	-	
Upper Level 5	UL	5E	105"	EGGCRATE	-	
Upper Level 5	UL	5F	105"	Gyp.Bd	ceiling mtd	
Upper Level 5	UL	Korean Lounge	-	-	-	
Upper Level 5	UL	KAL Lounge	-	-	-	
Upper Level/5	UL	Swissport Lounge	110"	Gyp.Bd	Recessed	PA system is independent of O'Hare's system.
Upper Level/5	UL	Air France Lounge	110"	ACT	Recessed	PA system is independent of O'Hare's system.
Upper Level/5	UL	Men's (COL 45)	96"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Women's (COL 45)	96"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Swiss Lounge	107"	ACT	Recessed	PA system is independent of O'Hare's system.
Upper Level/5	UL	Future Check Point # 10	-	-	-	
Upper Level 5	UL	Check Point # 10	288"	Exposed/Metal		No loudspeakers visible
Upper Level/5	UL	Men's (COL 88)	96"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Women's (COL 88)	96"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	British Lounge	102"	ACT	Recessed	PA system is independent of O'Hare's system.
Upper Level/5	UL	Alitalia Lounge	-	-	-	Alitalia Lounge moved to M7/M8 (Swissport Lounge)
Upper Level/5	UL	SAS Lounge	98"	Perforated metal	-	No visible loudspeakers in the perforated ceiling
Upper Level/5	UL	Men's (COL 22)	103"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Women's (COL 22)	103"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Men's (COL 20)	103"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Women's (COL 20)	103"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Men's (COL 10)	96"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Women's (COL 10)	96"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Men's (COL 113)	103"	Gyp.Bd	Recessed	
Upper Level/5	UL	Women's (COL 114)	103"	Gyp.Bd	Recessed	
Upper Level/5	UL	Men's (COL 88/P)	96"	Gyp.Bd	Recessed	

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
Upper Level/5	UL	Women's (COL 88/P)	96"	Gyp.Bd	Recessed	
Upper Level/5	UL	Men's (COL 72)	100"	Gyp.Bd	Recessed	Speakers not working
Upper Level/5	UL	Women's (COL 72)	100"	Gyp.Bd	Recessed	
Upper Level/5	UL	Men's (COL 128)	96"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Women's (COL 128)	96"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Men's (COL 135)	96"	Gyp.Bd	Recessed	Working
Upper Level/5	UL	Women's (COL 135)	96"	Gyp.Bd	Recessed	Working
Apron Level	AL	ATS Station	98"	Gyp.Bd	Recessed	
Apron Level	AL	Men's East (COL 21)	100"	Gyp.Bd	Recessed	
Apron Level	AL	Women's East (COL 21)	100"	Gyp.Bd	Recessed	
Apron Level	AL	Men's West (COL 4.5)	96"	Gyp.Bd	Recessed	
Apron Level	AL	Women's West (COL 4.5)	96"	Gyp.Bd	Recessed	

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
EPS / Level 1						
LEVEL 1	1	ELEV 1	10'-11"/12'-5"	Conc. Struc.	N/A	No loudspeakers
LEVEL 1	1	ELEV 2	10'-11"/12'-5"	Conc. Struc.	N/A	No loudspeakers
LEVEL 1	1	ELEV 3	11'-1"/12'-7"	Conc. Struc.	N/A	No loudspeakers
LEVEL 1	1	ELEV 4	11'-0"/12'-6"	Conc. Struc.	N/A	No loudspeakers
LEVEL 1	1	ELEV 5	10'-9"/12'-3"	Conc. Struc.	N/A	No loudspeakers
LEVEL 1	1	ELEV 6	10'-11"/12'-5"	Conc. Struc.	N/A	No loudspeakers
EPS / Level 2						
LEVEL 2	2	ELEV 1	9'-6"/10'-11"	Conc. Struc.	N/A	No loudspeakers
LEVEL 2	2	ELEV 2	9'-6"/11'-0"	Conc. Struc.	N/A	No loudspeakers
LEVEL 2	2	ELEV 3	9'-6"/11'-0"	Conc. Struc.	N/A	No loudspeakers
LEVEL 2	2	ELEV 4	9'-7"/11'-1"	Conc. Struc.	N/A	No loudspeakers
LEVEL 2	2	ELEV 5	9'-6"/11'-1"	Conc. Struc.	N/A	No loudspeakers
LEVEL 2	2	ELEV 6	9'-7"/11'-1"	Conc. Struc.	N/A	No loudspeakers
EPS / Level 3						
LEVEL 3	3	ELEV 1	9'-7"/11'-0"	Conc. Struc.	N/A	No loudspeakers
LEVEL 3	3	ELEV 2	9'-7"/11'-1	Conc. Struc.	N/A	No loudspeakers
LEVEL 3	3	ELEV 3	9'-7"/11'-1	Conc. Struc.	N/A	No loudspeakers
LEVEL 3	3	ELEV 4	9'-7"/11'-1	Conc. Struc.	N/A	No loudspeakers
LEVEL 3	3	ELEV 5	9'-7"/11'-1	Conc. Struc.	N/A	No loudspeakers
LEVEL 3	3	ELEV 6	9'-6"/11'-0"	Conc. Struc.	N/A	No loudspeakers
EPS / Level 4						
LEVEL 4	4	ELEV 1	9'-7"/11'-1"	Conc. Struc.	N/A	No loudspeakers
LEVEL 4	4	ELEV 2	9'-8"/11'-2"	Conc. Struc.	N/A	No loudspeakers
LEVEL 4	4	ELEV 3	9'-7"/11'-1"	Conc. Struc.	N/A	No loudspeakers
LEVEL 4	4	ELEV 4	9'-7"/11'-1"	Conc. Struc.	N/A	No loudspeakers

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
LEVEL 4	4	ELEV 5	9'-7"/11'-1"	Conc. Struc.	N/A	No loudspeakers
LEVEL 4	4	ELEV 6	9'-7"/11'-2"	Conc. Struc.	N/A	No loudspeakers
EPS / Level 5						
LEVEL 5	5	ELEV 1	9'-7"/11'-0"	Conc. Struc.	N/A	No loudspeakers
LEVEL 5	5	ELEV 2	9'-7"/11'-1"	Conc. Struc.	N/A	No loudspeakers
LEVEL 5	5	ELEV 3	9'-8"/11'-1"	Conc. Struc.	N/A	No loudspeakers
LEVEL 5	5	ELEV 4	9'-7"/11'-1"	Conc. Struc.	N/A	No loudspeakers
LEVEL 5	5	ELEV 5	9'-7"/11'-0"	Conc. Struc.	N/A	No loudspeakers
LEVEL 5	5	ELEV 6	9'-7"/11'-1"	Conc. Struc.	N/A	No loudspeakers
EPS / Level 6						Lot A
LEVEL 6	6	ELEV 1	-	Conc. Struc.	N/A	No loudspeakers
LEVEL 6	6	ELEV 2	-	Conc. Struc.	N/A	No loudspeakers
LEVEL 6	6	ELEV 3	-	Conc. Struc.	N/A	No loudspeakers
LEVEL 6	6	ELEV 4	-	Conc. Struc.	N/A	No loudspeakers
LEVEL 6	6	ELEV 5	-	Conc. Struc.	N/A	No loudspeakers
LEVEL 6	6	ELEV 6	-	Conc. Struc.	N/A	No loudspeakers
BUS SHUTTLE CENTER						No loudspeakers
	1	INTERIOR	10'3"/11'-6"	Conc. Struc.	N/A	No loudspeakers
	1	PERIMETER	7'-11"	Susp. 2x4 tile	N/A	No loudspeakers
ATS Terminal 1	Train	ATS-T1	11'-5"/12'-0"	Struct. Steel	Surface Mnt.	
ATS Terminal 2	Train	ATS-T2	11'-5"/12'-0"	Struct. Steel	Surface Mnt.	
ATS Terminal 3	Train	ATS-T3	11'-5"/12'-0"	Struct. Steel	Surface Mnt.	
ATS Terminal 5	Train	ATS-T5	9'-11"/3 STORIES	Susp. 2x2 tile	Recessed /Wall	
	Bridge	ATS-T5	8'-2"	Drywall	Recessed	
ATS Terminal - Lot E	Train	ATS-LOT E (train)	16'-10"	Struct. Steel	Surface Mnt.	
	Ground	ATS-LOT E (ext. lot)	N/A	N/A	Horn	
LOT B	Ground	N/A	-	-	N/A	No loudspeakers
LOT C	Ground	N/A	-	-	N/A	No loudspeakers

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
LOT D	Ground	N/A	-	-	N/A	No loudspeakers
LOT E	Ground	N/A	-	-	N/A	No loudspeakers
LOT F	Ground	N/A	-	-	N/A	No loudspeakers
LOT G	Ground	N/A	-	-	N/A	No loudspeakers
LOT TSA	Ground	N/A	-	-	N/A	No loudspeakers
LOT SUBURBAL	Ground	N/A	-	-	N/A	No loudspeakers
LOT CVHA	Ground	N/A	-	-	Horn/Pole Mnt.	
LOT CAR RENTAL	Ground	N/A	-	-	N/A	No loudspeakers
CTA PEDESTRIAN CORR.						
	Sublevel	1A	7'-11" to 8'-7"	vinyl panels	N/A	No loudspeakers
	Sublevel	1B	8'-7" to 8'-11"	vinyl panels	N/A	No loudspeakers
	Sublevel	2A/2B	8'-11", 10'-2", 16'-5"	12x12 metal tile 2x4 metal diffuser grid	N/A	* 13 loudspeakers at end of corridor before T2
	Sublevel	2C/2D	8'-11", 10'-2", 16'-5"	12x12 metal tile 2x4 metal diffuser grid	N/A	* 13 loudspeakers at end of corridor before T2
	Sublevel	3A	8'-11",12'-8",18'-9"	12x12 metal tile 2x4 metal diffuser grid	N/A	* 12 loudspeakers at end of corridor before T2
	Sublevel	3B	8'-11",12'-8",18'-9"	12x12 metal tile 2x4 metal diffuser grid	N/A	* 12 loudspeakers at end of corridor before T2
	Sublevel	1A/1B	8'-9" to 12'-3"	Formed metal strips over hat channels	N/A	No loudspeakers
	Sublevel	3A/3B	8'-9" to 12'-3"	Formed metal strips over hat channels	N/A	No loudspeakers
	Sublevel	Main Corridor	17'-10" to 20'-4"	Struc. Conc.	N/A	There are 2 conc. Beams at elevator bays 2,3,4,5 that drop down to 14'-1" A.F.F. Also, the light fixtures which are a large horizontal band extend down to 13'-9" A.F.F.
	Sublevel	TSA	-	-	-	Not accessible
	Sublevel	EC#1	12'-3"	Formed metal strips over hat channels	N/A	No loudspeakers
	Sublevel	EC#2	12'-3"	Formed metal strips over hat channels	N/A	No loudspeakers
				Formed metal		

Area / Terminal	Level	Room #	Ceiling Height	Ceiling Type	Existing Speaker Type	Comments
	Sublevel	EC#3	12'-3"	strips over hat channels	N/A	No loudspeakers
	Sublevel	EC#4	12'-3"	Formed metal strips over hat channels	N/A	No loudspeakers
	Sublevel	EC#5	12'-3"	Formed metal strips over hat channels	N/A	No loudspeakers
	Sublevel	EC#6	12'-3"	Formed metal strips over hat channels	N/A	No loudspeakers
	Sublevel	EC#EPS Shelter	-	-	-	Not accessible
ROTUNDA						
Upper Level/Conc G	UL	Women's (COL 13)	100"	Perforated Ceiling	N/A	Speakers are not visible
Upper Level/Conc G	UL	Men's (COL 15)	100"	Perforated Ceiling	N/A	Speakers are not visible
Upper Level/Conc G	UL	Admirals Club	105"	ACT	N/A	Admiral has their own PA system but does not get the announcements from the general PA system. They do not want it either
Upper Level/Conc G	UL	Men's (COL 35)	103"	Perforated Ceiling	N/A	Speakers are not visible
Upper Level/Conc G	UL	Women's (COL 35)	103"	Perforated Ceiling	N/A	Speakers are not visible

Exhibit 2: Schedule of Compensation

The Respondents are required to submit prices using this "OPA Cost Sheet". Respondents are required to enter the unit price for the CDA estimated quantity of each line item in the 'CDA Estimated Qty' worksheet. The total lump sum price will be one of the parameters used to determine project award. The successful respondent will have the opportunity to adjust the total initial lump sum price if it is determined that the final design documents quantities differ from the initial lump sum price quantities by more than 10%.

Altering this format or failure to complete all required fields (shaded in light gray) will result in deeming a Proposal non-responsive to the RFP.

Prices shall include all labor, materials, equipment, required tools, licenses, permitting and all work necessary to fully implement the OPA.

OPA Cost Sheet: CDA Estimated Quantities

Item Number	Pay Item Number	Equipment Definition	Equipment Description	Basis of design Make and Model	Unit of Measure	CDA Estimated Qty	Unit Price	Extended Price
1	OPA-1	Existing System Evaluation			LS	1		
2	OPA-2	Project Management			LS	1		
3	OPA-3	Preliminary Engineering			LS	1		
4	OPA-4	Final Engineering			LS	1		
5	OPA-5	Software Development			LS	1		
6	OPA-6	Training			LS	1		
7	OPA-7	General & Administrative			LS	1		
8	OPA-8	Extended Warranty Service*			LS	1		
9	OPA-9	Ambient Noise Sensing Hardware	Ambient noise sensing for up to (2) ambient noise microphones	Biamp / ANC-1	EA	105		

10	OPA-10	Amplifier	400W	Federal Signal / UVTDU	EA	14		
11	OPA-11	Amplifier Cards	Amplifier Module Card, Selectable 100-600W, Selectable low impedance (4,6,8 ohms) OR Constant voltage output (70V or 100V)	Biamp / AM-600	EA	818		
12	OPA-12	Amplifier Chassis	Networked multi-channel card amplifier chassis, integrated DSP	Biamp / VA-8600	EA	109		
13	OPA-13	Announcement Control System	Networked message server, message storage and playback, event scheduling, VOIP interface, logging, remote access	Biamp / MS-1	EA	7		
14	OPA-14	Antenna		Federal Signal / OMNI - 4	EA	10		
15	OPA-15	Antenna Mounting Bracket		Federal Signal / AMB - p	EA	10		
16	OPA-16	Cabling for Dressing Racks	Interconnect and network cabling in head-end room	Various / Various	LS	7		
17	OPA-17	Digital Microphone System	Test mic for head-end room, 10- button key pad	Biamp / DS - 1	EA	7		
18	OPA-18	Digital Voice Card	Federal Signal	Federal Signal / DVSD	EA	10		
19	OPA-19	Equipment Rack		Middle Atlantic / WRK - 44SA -27	EA	86		
20	OPA-20	Equipment Rack Components	Screws, Blanks, Rails, Etc.	Middle Atlantic / Varies (LOT)	EA	7		
21	OPA-21	Horn Loudspeakers	Elevator Bank Exterior	Atlas / AP - 15T	EA	24		
22	OPA-22	LED Obstruction Light	Red	Federal Signal / POL-21004- 1F-R-34B-S	EA	10		
23	OPA-23	Loud Speaker	Back Box (CDA Qty. = 1,481)	Atlas / 96-8-7	EA	3,800		
24	OPA-24	Loud Speaker	Baffle (CDA Qty. = 1,481)	Atlas / FA51-8	EA	3,800		

25	OPA-25	Loud Speaker	Ceiling Mounted (CDA Qty. = 1,493)	Atlas / C803A	EA	3,800		
26	OPA-26	Loud Speaker	Transformer (CDA Qty. = 1,481)	Atlas / HT87	EA	3,800		
27	OPA-27	Mic to Line Level Converter		Radio Design Labs / STM-1	EA	221		
28	OPA-28	Mounting Pole	50' High Steel Pole	Federal Signal / TK-PO-GALDPOL2	EA	10		
29	OPA-29	Network Switch	Layer 3 managed switch, 10/100Mbps, 48 ports, fiber transceiver	Cisco / Catalyst 2948G-L3	EA	7		
30	OPA-30	Networked Audio Output	Converter PA System, Digital Audio to Analog	Biamp / VO-4	EA	18		
31	OPA-31	Omni-Directional Speaker Array		Federal Signal / DSA	EA	10		
32	OPA-32	Paging Microhpone Analog to Digital Conversion	Analog to Digital Conversion - Networked audio input expansion device, (6) analog mic/line inputs, integrated DSP	Biamp / VI-6	EA	40		
33	OPA-33	PBX to VOIP	8-port adapter for phone extension conversion from PBX to VIOP	Cisco / SPA8000	EA	7		
34	OPA-34	Power Supply to Mic Line Level Converter		Radio Design Labs / PS-24AS	EA	221		
35	OPA-35	Rack Mounted LCD Monitor and Keyboard	Access to PA Systems control and settings from head-end equipment room	Rose Electronics / RackView Widescreen	EA	7		
36	OPA-36	Rotating LED Light	Amber	Federal Signal / 371 LED-120A	EA	10		
37	OPA-37	UHF Radio	2-Way UHF Radio	Federal Signal / UV400	EA	10		
38	OPA-38	Microphone	Ambient Noise Sensing	AKG / 514B	EA	207		
39	OPA-39	Microphone	Push-to-Talk	Shure / 514B	EA	221		
40	OPA-40	3/4" Conduit			LF	120,000		

41	OPA-41	Speaker Cable			LF	360,000		
42	OPA-42	IP Cable for Mics and Mic Stations (to IDF/MDF Closets)			LF	60,000		
43	OPA-43	Conduit for IP Cable for Mics and Mic Stations (to IDF/MDF Closets)			LF	20,000		
44	OPA-44	IP Network Equipment and Racks at IDF/MDF Closets			LOCS	5		
45	OPA-45	Modify / Enhance Head-End Equip. at T.2/T.3	Integration of Secured Area Paging w/ Concourse Area Paging		LOCS	12		
46	OPA-46	Cable / Conduit to extend Secured Areas to Concourse Head-End Locs			LF	25,000		
47	OPA-47	Architectural Finishes	Affected by PA System Integration		LS	1		
48	OPA-48	Programmable IED Head-End Equipment (Not Incl. by BIAMP)			EA	15		
49	OPA-49	UPS System Replacement			EA	10		
50	OPA-50	Visual Paging System - Integrated with Audio Paging for ADA Compliance			LS	1		
Total Initial Lump Sum Price								

*See Attachment 3 - Paragraph XX for definition of Extended Warranty Service

CITY OF CHICAGO
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MBE & WBE Special Conditions for Commodities or Services Contracts

ARTICLE 1. SPECIAL CONDITIONS REGARDING MINORITY BUSINESS ENTERPRISE COMMITMENT AND WOMEN BUSINESS ENTERPRISE COMMITMENT FOR COMMODITIES OR SERVICES

1.1. **Policy and Terms**

It is the policy of the City of Chicago that Local Businesses certified as Minority Owned Business Enterprises (MBE) and Women Owned Business Enterprises (WBE) in accordance with Section 2-92-420 et seq. of the Municipal Code of Chicago and Regulations Governing Certification of Minority and Women-owned Businesses and all other Regulations promulgated under the aforementioned sections of the Municipal Code, as well as MBEs and WBEs certified by Cook County, Illinois, will have full and fair opportunities to participate fully in the performance of this contract. Therefore, the Contractor will not discriminate against any person or business on the basis of race, color, sex, gender identity, age, religion, disability, national origin, ancestry, sexual orientation, marital status, parental status, military discharge status or source of income and will take affirmative action to ensure that women and minority businesses will have the maximum opportunity to compete for and perform subcontracts for supplies or services.

Pursuant to Section 2-92-430 of the Municipal Code of Chicago, the Chief Procurement Officer has established a goal of awarding not less than 25% of the annual dollar value of all non-construction contracts to certified MBEs and 5% of the annual dollar value of all non-construction contracts to certified WBEs.

Accordingly, the Contractor commits to make Good Faith Efforts to expend at least the following percentages of the total contract price (inclusive of any and all modifications and amendments), if awarded, for contract participation by MBEs and WBEs:

MBE Percentage	WBE Percentage
25%	5%

This commitment is met by the Contractor's status as a MBE or WBE, or by a joint venture with one or more MBEs or WBEs as prime contractor (to the extent of the MBE or WBE participation in such joint venture), or by subcontracting a portion of the work to one or more MBEs or WBEs, or by the purchase of materials used in the performance of the contract from one or more MBEs or WBEs, or by the indirect participation of MBEs or WBEs in other aspects of the Contractor's business (but no dollar of such indirect MBE or WBE participation will be credited more than once against a Contractor's MBE or WBE commitment with respect to all government Contracts of such Contractor), or by any combination of the foregoing.

Note: MBE/WBE participation goals are separate and those businesses certified with the City of Chicago as both MBE and WBE may only be listed on a bidder's compliance plan as either a MBE or a WBE, but not both to demonstrate compliance with the Contract Specific Goals.

The Contractor also may meet all or part of this commitment through credits received pursuant to Section 2-92-530 of the Municipal Code of Chicago for the voluntary use of MBEs or WBEs in private sector contracts.

Pursuant to 2-92-535, the prime contractor may apply be awarded an additional 0.333 percent credit, up to a maximum of a total of 5 percent additional credit, for every 1 percent of the value of a contract self-performed by MBEs or WBEs, or combination thereof, that have entered into a mentor agreement with the contractor. This up to 5% may be applied to the Contract Specific Goals, or it may be in addition to the Contract Specific Goals.

1.2. **Definitions**

"Area of Specialty" means the description of an MBE or WBE firm's business which has been determined by the Chief Procurement Officer to be most reflective of the MBE or WBE firm's claimed specialty or expertise. Each MBE/WBE letter of certification contains a description of the firm's Area of Specialty. This information is also contained in the Directory (defined below). Credit toward this Contract's MBE and WBE participation goals shall be limited to the participation of firms performing within their Area of Specialty.

> **NOTICE:** *The City of Chicago does not make any representation concerning the ability of any MBE/WBE to perform work within their Area of Specialty. It is the responsibility of all contractors to determine the capability and capacity of MBEs/WBEs to satisfactorily perform the work proposed.*

"B.E.P.D." means an entity certified as a Business enterprise owned or operated by people with disabilities as defined in MCC Section 2-92-586.

"Bid" means a bid, proposal, or submittal detailing a description of the services or work to be provided by the contractor in response to a bid solicitation, request for proposal, request for qualification of task order request (issued in accordance with the Master Consulting Agreement) that is issued by the City.

"Bidder" means any person or business entity that submits a bid, proposal, qualification or submittal that seeks to enter into a contract with the City, and includes all partners, affiliates and joint ventures of such person or entity.

"Broker" means a person or entity that fills orders by purchasing or receiving supplies from a third party supplier rather than out of its own existing inventory and provides no commercially useful function other than acting as a conduit between his or her supplier and his or her customer.

"Chief Procurement Officer" or "CPO" means the chief procurement officer of the City of Chicago or his or her designee.

"Commercially Useful Function" means responsibility for the execution of a distinct element of the work of the contract, which is carried out by actually performing, managing, and supervising the work involved, evidencing the responsibilities and risks of a business owner such as negotiating the terms of (sub)contracts, taking on a financial risk commensurate with the contract or its subcontract, responsibility for acquiring the appropriate lines of credit and/or loans, or fulfilling responsibilities as a joint venture partner as described in the joint venture agreement.

"Contract Specific Goals" means the subcontracting goals for MBE and WBE participation established for a particular contract.

"Contractor" means any person or business entity that has entered into a contract with the City as described herein, and includes all partners, affiliates, and joint ventures of such person or entity.

"Direct Participation" the value of payments made to MBE or WBE firms for work that is performed in their Area of Specialty directly related to the performance of the subject matter of the Contract will count as Direct Participation toward the Contract Specific Goals.

"Directory" means the Directory of Certified "Minority Business Enterprises" and "Women Business Enterprises" maintained and published by the City of Chicago. The Directory identifies firms that have been certified as MBEs and WBEs, and includes both the date of their last certification and the area of specialty in which they have been certified. Contractors are responsible for verifying the current certification status of all proposed MBE, and WBE firms.

"Good Faith Efforts" means actions undertaken by a bidder or contractor to achieve a Contract Specific Goal that the CPO or his or her designee has determined, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program's requirements.

"Indirect Participation" refers to the value of payments made to MBE or WBE firms for work that is done in their Area of Specialty related to other aspects of the Contractor's business. (Note: no dollar of such indirect MBE or WBE participation shall be credited more than once against a contractor's MBE or WBE commitment with respect to all government contracts held by that contractor.)

"Joint venture" means an association of a MBE or WBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which each joint venture partner contributes property, capital, efforts, skills and knowledge, and in which the MBE or WBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

"Mentor-Protégé Agreement" means an agreement between a prime and MBE or WBE subcontractor pursuant to MCC 2-92-535, that is approved by the City of Chicago and complies with all requirements of MCC 2-92-535 and any rules and regulations promulgated by the Chief Procurement Officer.

"Minority Owned Business Enterprise" or **"MBE"** means a firm awarded certification as a minority owned and controlled business in accordance with City Ordinances and Regulations as well as a firm awarded certification as a minority owned and controlled business by Cook County, Illinois.

"Municipal Code of Chicago" or **"MCC"** means the Municipal Code of the City of Chicago.

"Supplier" or **"Distributor"** refers to a company that owns, operates, or maintains a store, warehouse or other establishment in which materials, supplies, articles or equipment are bought, kept in stock and regularly sold or leased to the public in the usual course of business. A regular distributor or supplier is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for performance of a contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a regular distributor the firm must engage in, as its principal business and in its own name, the purchase and sale of the products in question. A regular distributor in such bulk items as steel, cement, gravel, stone, and petroleum products need not keep such products in stock if it owns or operates distribution equipment.

"Women Owned Business Enterprise" or **"WBE"** means a firm awarded certification as a women owned and controlled business in accordance with City Ordinances and Regulations as well as a firm awarded certification as a women owned business by Cook County, Illinois.

1.3. **Joint Ventures**

The formation of joint ventures to provide MBEs and WBEs with capacity and experience at the prime contracting level, and thereby meet Contract Specific Goals (in whole or in part) is encouraged. A joint venture may consist of any combination of MBEs, WBEs, and non-certified firms as long as one member is an MBE or WBE.

a. The joint venture may be eligible for credit towards the Contract Specific Goals only if:

   i. The MBE or WBE joint venture partner's share in the capital contribution, control, management, risks and profits of the joint venture is equal to its ownership interest;

   ii. The MBE or WBE joint venture partner is responsible for a distinct, clearly defined portion of the requirements of the contract for which it is at risk;

   iii. Each joint venture partner executes the bid to the City; and

   iv. The joint venture partners have entered into a written agreement specifying the terms and conditions of the relationship between the partners and their relationship and responsibilities to the contract, and all such terms and conditions are in accordance with the conditions set forth in Items i, ii, and iii above in this Paragraph a.

b. The Chief Procurement Officer shall evaluate the proposed joint venture agreement, the Schedule B submitted on behalf of the proposed joint venture, and all related documents to determine whether these requirements have been satisfied. The Chief Procurement Officer shall also consider the record of the joint venture partners on other City of Chicago contracts. The decision of the Chief Procurement Officer regarding the eligibility of the joint venture for credit towards meeting the Contract Specific Goals, and the portion of those goals met by the joint venture, shall be final.

   The joint venture may receive MBE or WBE credit for work performed by the MBE or WBE joint venture partner(s) equal to the value of work performed by the MBE or WBE with its own forces for a distinct, clearly defined portion of the work.

   Additionally, if employees of the joint venture entity itself (as opposed to employees of the MBE or WBE partner) perform the work, then the value of the work may be counted toward the Contract Specific Goals at a rate equal to the MBE or WBE firm's percentage of participation in the joint venture as described in Schedule B.

   The Chief Procurement Officer may also count the dollar value of work subcontracted to other MBEs and WBEs. Work performed by the forces of a non-certified joint venture partner shall not be counted toward the Contract Specific Goals.

c. **Schedule B: MBE/WBE Affidavit of Joint Venture**

   Where the bidder's Compliance Plan includes the participation of any MBE or WBE as a joint venture partner, the bidder must submit with its bid a Schedule B and the proposed joint venture agreement. These documents must both clearly evidence that the MBE or WBE joint venture partner(s) will be responsible for a clearly defined portion of the work to be performed, and that the MBE's or WBE's

responsibilities and risks are proportionate to its ownership percentage. The proposed joint venture agreement must include specific details related to:

i. The parties' contributions of capital, personnel, and equipment and share of the costs of insurance and bonding;

ii. Work items to be performed by the MBE's or WBE's own forces and/or work to be performed by employees of the newly formed joint venture entity;

iii. Work items to be performed under the supervision of the MBE or WBE joint venture partner; and

iv. The MBE's or WBE's commitment of management, supervisory, and operative personnel to the performance of the contract.

NOTE: Vague, general descriptions of the responsibilities of the MBE or WBE joint venture partner do not provide any basis for awarding credit. For example, descriptions such as "participate in the budgeting process," "assist with hiring," or "work with managers to improve customer service" do not identify distinct, clearly defined portions of the work. Roles assigned should require activities that are performed on a regular, recurring basis rather than as needed. The roles must also be pertinent to the nature of the business for which credit is being sought. For instance, if the scope of work required by the City entails the delivery of goods or services to various sites in the City, stating that the MBE or WBE joint venture partner will be responsible for the performance of all routine maintenance and all repairs required to the vehicles used to deliver such goods or services is pertinent to the nature of the business for which credit is being sought.

1.4. **Counting MBE/WBE Participation Toward the Contract Specific Goals**

Refer to this section when preparing the MBE/WBE compliance plan and completing Schedule D-1 for guidance on what value of the participation by MBEs and WBEs will be counted toward the stated Contract Specific Goals. The "Percent Amount of Participation" depends on whether and with whom a MBE or WBE subcontracts out any portion of its work and other factors.

Firms that are certified as both MBE and WBE may only be listed on a bidder's compliance plan as either a MBE or a WBE to demonstrate compliance with the Contract Specific Goals. For example, a firm that is certified as both a MBE and a WBE may only be listed on the bidder's compliance plan under one of the categories, but not both. Only Payments made to MBE and WBE firms that meet BOTH the Commercially Useful Function and Area of Specialty requirements above will be counted toward the Contract Specific Goals.

a. Only expenditures to firms that perform a Commercially Useful Function as defined above may count toward the Contract Specific Goals.

i. The CPO will determine whether a firm is performing a commercially useful function by evaluating the amount of work subcontracted, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the credit claimed for its performance of the work, industry practices, and other relevant factors.

ii. A MBE or WBE does not perform a commercially useful function if its participation is only required to receive payments in order to obtain the appearance of MBE or WBE participation. The CPO may examine similar commercial transactions, particularly those in which MBEs or WBEs do not participate, to determine whether non MBE and non WBE firms perform the same function in the marketplace to make a determination.

iii. Indications that a subcontractor is not performing a commercially useful function include, but are not limited to, labor shifting and equipment sharing or leasing arrangements with the prime contractor or a first tier subcontractor.

b. Only the value of the dollars paid to the MBE or WBE firm for work that it performs in its Area of Specialty in which it is certified counts toward the Contract Specific Goals.

c. For maintenance, installation, repairs or inspection, or professional services, if the MBE or WBE performs the work itself: 100% of the value of work actually performed by the MBE's or WBE's own forces shall be counted toward the Contract Specific Goals, including the cost of supplies and materials purchased or equipment leased by the MBE or WBE from third parties or second tier subcontractors in order to perform its (sub)contract with its own forces (except supplies and equipment the MBE or WBE subcontractor purchases or leases from the prime contractor or its affiliate). 0% of the value of work at the project site that a MBE or WBE subcontracts to a non-certified firm counts toward the Contract Specific Goals.

d. If the MBE or WBE is a manufacturer: 100% of expenditures to a MBE or WBE manufacturer for items needed for the Contract shall be counted toward the Contract Specific Goals. A manufacturer is a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the bidder or contractor.

e. If the MBE or WBE is a distributor or supplier: 60% of expenditures for materials and supplies purchased from a MBE or WBE that is certified as a regular dealer or supplier shall be counted toward the Contract Specific Goals.

f. If the MBE or WBE is a broker:

i. Zero percent (0%) of expenditures paid to brokers will be counted toward the Contract Specific Goals.

ii. As defined above, Brokers provide no commercially useful function.

g. If the MBE or WBE is a member of the joint venture contractor/bidder:

i. A joint venture may count the portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract that the MBE or WBE performs with its own forces toward the Contract Specific Goals; or

ii. If employees of this distinct joint venture entity perform the work then the value of the work may be counted toward the Contract Specific Goals at a rate equal to the MBE or WBE firm's percentage of participation in the joint venture as described in the Schedule B.

iii. A joint venture may also count the dollar value of work subcontracted to other MBEs and WBEs.

h. If the MBE or WBE subcontracts out any of its work:

i. 100% of the value of the work subcontracted to other MBEs or WBEs performing work in its Area of Specialty may be counted toward the Contract Specific Goals.

ii. 0% of the value of work that a MBE or WBE subcontracts to a non-certified firm counts toward the Contract Specific Goals (except as allowed by (c) above).

iii. The fees or commissions charged for providing a bona fide service, such as professional, technical, consulting or managerial services or for providing bonds or insurance and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for performance of the Contract, provided that the fee or commission is determined by the Chief Procurement Officer to be reasonable and not excessive as compared with fees customarily allowed for similar services.

iv. The fees charged for delivery of materials and supplies required on a job site (but not the cost of the materials and supplies themselves) when the hauler, trucker, or delivery service is not also the manufacturer of or a regular dealer in the materials and supplies, provided that the fee is determined by the Chief Procurement Officer to be reasonable and not excessive as compared with fees customarily allowed for similar services.

v. The fees or commissions charged for providing any bonds or insurance, but not the cost of the premium itself, specifically required for the performance of the Contract, provided that the fee or commission is determined by the Chief Procurement Officer to be reasonable and not excessive as compared with fees customarily allowed for similar services.

1.5. **Regulations Governing Reductions to or Waiver of MBE/WBE Goals**

The following Regulations set forth the standards to be used in determining whether or not a reduction or waiver of the MBE/WBE commitment goals of a particular contract is appropriate. If a bidder determines that it is unable to meet the MBE and/or WBE Contract-Specific Goals on a City of Chicago contract, a written request for the reduction or waiver of the commitment must be included in the bid or proposal.

The written request for reduction or waiver from the commitment must be in the form of a signed petition for grant of relief from the MBE/WBE percentages submitted on the bidder's letterhead, and must demonstrate that all required efforts as set forth in this document were taken to secure eligible Minority and Women Business Enterprises to meet the commitments. The Chief Procurement Officer or designee shall determine whether the request for the reduction or waiver will be granted.

A bidder will be considered responsive to the terms and conditions of these Regulations if, at the time of bid, it submits a waiver request and all supporting documentation that adequately addresses the conditions for waiver of MBE/WBE goals, including proof of notification to assist agencies except:

- Bidders responding to Request for Proposals (RFPs) who have been identified as a short listed candidate and/or a prospective awardee will be given a designated time allowance, but no more than fourteen (14) calendar days to submit to the Department of Procurement Services complete documentation that adequately addresses the conditions for waiver described herein; and
- Bidders responding to Request for Information and or Qualifications (RFI/RFQs) deemed by the Chief Procurement Officer or authorized designee to be the most responsive and responsible shall submit documentation that adequately addresses the conditions for waiver described herein during negotiations.

Failure to submit documentation sufficient to support the waiver request will cause the bid/proposal to be found non-responsive by the Chief Procurement Officer, and the bid/proposal will be rejected. In such cases the remedies to be taken by the Chief Procurement Officer, in his or her discretion, may include, but are not limited to, forfeiture of bid deposit; negotiating with the next lowest bidder; or re-advertising the bid/proposal. All bidders must submit all required documents at the time of bid opening to expedite the contract award.

1.5.1. Direct / Indirect Participation

Each of the following elements must be present in order to determine whether or not such a reduction or waiver is appropriate.

a. The bidder has documented the unsuccessful solicitation for either subcontractors or joint venture partners of at least 50% (or at least five when there are more than eleven certified firms in the commodity area) of the appropriate certified MBE/WBE firms to perform any direct or indirect work identified or related to the advertised bid/proposal. Documentation must include but is not necessarily limited to:

1. A detailed statement of efforts to identify and select portions of work identified in the bid solicitation for subcontracting to certified MBE/WBE firms;
2. A listing of all MBE/WBE firms contacted that includes:
    - Name, address, telephone number and email of MBE/WBE firms solicited;
    - Date and time of contact;
    - Method of contact (written, telephone, transmittal of facsimile documents, email, etc.)
3. Copies of letters or any other evidence of mailing that substantiates outreach to MBE/WBE vendors that includes:
    - Project identification and location;
    - Classification/commodity of work items for which quotations were sought;
    - Date, item and location for acceptance of subcontractor bid proposals;
    - Detailed statement which summarizes direct negotiations with appropriate MBE/WBE firms for specific portions of the work and indicates why negotiations were unsuccessful;
    - Affirmation that Good Faith Efforts have been demonstrated by:
        - choosing subcontracting opportunities likely to achieve MBE/WBE goals;
        - not imposing any limiting conditions which were not mandatory for all subcontractors;
        - providing notice of subcontracting opportunities to M/WBE firms and assist agencies at least five (5) business days in advance of the initial bid due date.

OR

b. Subcontractor participation will be deemed excessively costly when the MBE/WBE subcontractor proposal exceeds the average price quoted by more than twenty percent (20%). In order to establish that a subcontractor's quote is excessively costly, the bidder must provide the following information:

1. A detailed statement of the work identified for MBE/WBE participation for which the bidder asserts the MBE/WBE quote(s) were excessively costly (in excess of 20% higher).
    - A listing of all potential subcontractors contacted for a quotation on that work item;
    - Prices quoted for the subcontract in question by all such potential subcontractors for that work item.
2. Other documentation which demonstrates to the satisfaction of the Chief Procurement Officer that the MBE/WBE proposals are excessively costly, even though not in excess of 20% higher than the average price quoted. This determination will be based on factors that include, but are not limited to the following:
    - The City's estimate for the work under a specific subcontract;
    - The bidder's own estimate for the work under the subcontract;
    - An average of the bona fide prices quoted for the subcontract;
    - Demonstrated increase in other contract costs as a result of subcontracting to the M/WBE or other firm.

1.5.2. Assist Agency Participation in wavier/reduction requests

Every waiver and/or reduction request must include evidence that the bidder has provided timely notice of the need for subcontractors to an appropriate association/assist agency representative of the MBE/WBE business community. This notice must be given at least five (5) business days in advance of the initial bid due date.

The notice requirement of this Section will be satisfied if a bidder contacts at least one of the associations on Attachment A to these Regulations when the prime contractor seeks a waiver or reduction in the utilization goals. Attachment B to these Regulations provides the letter format that a prime contractor may use. Proof of notification prior to bid submittal (e.g. certified mail receipt or facsimile transmittal receipt) will be required to be submitted with the bid for any bid/proposal to be deemed responsive. If deemed appropriate, the Contract Compliance Officer may contact the assist agency for verification of notification.

1.5.3. Impracticability

If the Chief Procurement Officer determines that a lesser MBE and/or WBE percentage standard is appropriate with respect to a particular contract subject to competitive bidding prior to the bid solicitations for such contract, bid specifications shall include a statement of such revised standard.

The requirements set forth in these Regulations (this subsection 1.5 "Regulations Governing Reductions to or Waiver of MBE/WBE Goals") shall not apply where the Chief Procurement Officer determines prior to the bid solicitations that MBE/WBE subcontractor participation is impracticable.

This may occur whenever the Chief Procurement Officer determines that for reasons of time, need, industry practices or standards not previously known by the Chief Procurement Officer, or such other extreme circumstances as may be deemed appropriate, such a Waiver is in the best interests of the City. This determination may be made in connection with a particular contract, whether before the contract is let for bid, during the bid or award process, before or during negotiation of the contract, or during the performance of the contract.

For all notifications required to be made by bidders, in situations where the Chief Procurement Officer has determined that time is of the essence, documented telephone contact may be substituted for letter contact.

1.6. **Procedure to Determine Bid Compliance**

A bid may be rejected as non-responsive if it fails to submit one or more of the following with its bid demonstrating its Good Faith Efforts to meet the Contract Specific Goals by reaching out to MBEs and WBEs to perform work on the contract:

- An MBE/WBE compliance plan demonstrating how the bidder plans to meet the Contract Specific Goals; and/or

- A request for reduction or waiver of the Contract Specific Goals in accordance with Section 2-92-450 of the MCC.

Only compliance plans utilizing MBE and WBE firms that meet BOTH the Commercially Useful Function and Area of Specialty requirements will be counted toward the Contract Specific Goals.

The following Schedules and described documents constitute the bidder's MBE/WBE proposal, and must be submitted in accordance with the guidelines stated:

(1) Schedule C-1: Letter of Intent from MBE/WBE to Perform as Subcontractor, Supplier and/or Consultant.
The bidder must submit the appropriate Schedule C-1 with the bid for each MBE and WBE included on the Schedule D-1. Suppliers must submit the Schedule C-1 for Suppliers, first tier subcontractors must submit a Schedule C-1 for Subcontractors to the Prime Contractor and second or lower tier subcontractors must submit a Schedule C-1 for second tier Subcontractors. The City encourages subcontractors to utilize the electronic fillable format Schedule C-1, which is available at the Department of Procurement Services website, http://cityofchicago.org/forms. Each Schedule C-1 must be executed by each MBE and WBE and accurately detail the work to be performed by the MBE or WBE and the agreed upon rates/prices. Each Schedule C must also include a separate sheet as an attachment on which the MBE or WBE fully describes its proposed scope of work, including a description of the commercially useful function being performed by the MBE or WBE in its Area of Specialty. If a facsimile copy of the Schedule C-1 has been submitted with the bid, an executed original Schedule C-1 must be submitted by the bidder for each MBE and WBE included on the Schedule D-1 within five business days after the date of the bid opening.

Failure to submit a completed Schedule C-1 in accordance with this section shall entitle the City to deem the bid/proposal non-responsive and therefore reject the bid/proposal.

(2) Letters of Certification.
A copy of each proposed MBE/WBE firm's current Letter of Certification from the City of Chicago or Cook County Illinois, must be submitted with the bid/proposal. All Letters of Certification issued by the City of Chicago and Cook County include a statement of the MBE/WBE firm's Area of Specialty. The MBE/WBE firm's scope of work, as detailed by their Schedule C-1, must conform to their stated Area of Specialty.

(3) Schedule B: Affidavit of Joint Venture, and Joint Venture Agreements (if applicable).
If the bidder's MBE/WBE proposal includes the participation of a MBE/WBE as joint venture on any tier (either as the bidder or as a subcontractor), the bidder must provide a copy of the joint venture agreement and a Schedule B along with all other requirements listed in Section 1.3, "Joint Ventures," above. In order to demonstrate the MBE/WBE partner's share in the ownership, control, management responsibilities, risks and profits of the joint venture, the proposed joint venture agreement must include specific details related to: (1) contributions of capital and equipment; (2) work responsibilities or other performance to be undertaken by the MBE/WBE; and (3) the commitment of management, supervisory and operative personnel employed by the MBE/WBE to be dedicated to the performance of the contract. The joint venture agreement must also clearly define each partner's authority to contractually obligate the joint venture and each partner's authority to expend joint venture funds (e.g., check signing authority).

(4) Schedule D-1: Required Schedules Regarding MBE/WBE Utilization
Bidders must submit, together with the bid, a completed Schedule D-1 committing them to the utilization of each listed MBE/WBE firm. The City encourages bidders to utilize the electronic fillable format Schedule D-1, which is available at the Department of Procurement Services website, http://cityofchicago.org/forms. Except in cases where the bidder has submitted a request for a complete waiver of or variance from the MBE/WBE commitment in accordance with Section 1.5 "Regulations Governing Reductions to or Waiver of MBE/WBE Goals" herein, the bidder must commit to the expenditure of a specific dollar amount of participation by each MBE/WBE firm included on their Schedule D-1. The total dollar commitment to proposed MBEs must at least equal the MBE goal, and the total dollar commitment to proposed WBEs must at least equal the WBE goal. Bidders are responsible for calculating the dollar equivalent of the MBE and WBE goals as percentages of their total base bids or in the case of Term Agreements, depends upon requirements agreements and blanket agreements, as percentages of the total estimated usage. All commitments made by the bidder's Schedule D-1 must conform to those presented in the submitted Schedule C-1. If Schedule C-1 is submitted after the opening, the bidder may submit a revised Schedule D-1 (executed and notarized to conform with the Schedules C-1). Bidders shall not be permitted to add MBEs or WBEs after bid opening to meet the Contract Specific Goals, however, contractors are encouraged to add additional MBE/WBE vendors to their approved compliance plan during the performance of the contract

when additional opportunities for participation are identified. Except in cases where substantial and documented justification is provided, bidders will not be allowed to reduce the dollar commitment made to any MBE or WBE in order to achieve conformity between the Schedules C-1 and D-1.

All commitments for joint venture agreements must be delineated in the Schedule B.

(5) Application for Approval of Mentor Protégé Agreement

Any applications for City approval of a Mentor Protégé agreement must be included with the bid. If the application is not approved, the bidder must show that it has made good faith efforts to meet the contract specific goals.

1.7. **Reporting Requirements During the Term of the Contract**

a. The Contractor will, not later than thirty (30) calendar days from the award of a contract by the City, execute formal contracts or purchase orders with the MBEs and WBEs included in their approved MBE/WBE Utilization Plan. These written agreements will be made available to the Chief Procurement Officer upon request.

b. The Contractor will be responsible for reporting payments to all subcontractors on a monthly basis in the form of an electronic report. Upon the first payment issued by the City of Chicago to the contractor for services performed, on the first day of each month and every month thereafter, email and or fax audit notifications will be sent out to the Contractor with instructions to report payments that have been made in the prior month to each subcontractor. The reporting of payments to all subcontractors must be entered into the Certification and Compliance Monitoring System (C2), or whatever reporting system is currently in place, on or before the fifteenth (15th) day of each month.

c. Once the prime Contractor has reported payments made to each subcontractor, including zero dollar amount payments, the subcontractor will receive an email and or fax notification requesting them to log into the system and confirm payments received. All monthly confirmations must be reported on or before the 20th day of each month. Contractor and subcontractor reporting to the C2 system must be completed by the 25th of each month or payments may be withheld.

d. All subcontract agreements between the contractor and MBE/WBE firms or any first tier non-certified firm and lower tier MBE/WBE firms must contain language requiring the MBE/WBE to respond to email and/or fax notifications from the City of Chicago requiring them to report payments received for the prime or the non-certified firm.

Access to the Certification and Compliance Monitoring System (C2), which is a web based reporting system, can be found at: https://chicago.mwdbe.com

e. The Chief Procurement Officer or any party designated by the Chief Procurement Officer, shall have access to the contractor's books and records, including without limitation payroll records, tax returns and records and books of account, to determine the contractor's compliance with its commitment to MBE and WBE participation and the status of any MBE or WBE performing any portion of the contract. This provision shall be in addition to, and not a substitute for, any other provision allowing inspection of the contractor's records by any officer or official of the City for any purpose.

f. The Contractor shall maintain records of all relevant data with respect to the utilization of MBEs and WBEs, retaining these records for a period of at least five years after project closeout. Full access to these records shall be granted to City, federal or state authorities or other authorized persons.

1.8. **Changes to Compliance Plan**

1.8.1. Permissible Basis for Change Required

No changes to the Compliance Plan or contractual MBE and WBE commitments or substitution of MBE or WBE subcontractors may be made without the prior written approval of the Contract Compliance Officer. Unauthorized changes or substitutions, including performing the work designated for a subcontractor with the contractor's own forces, shall be a violation of these Special Conditions and a breach of the contract with the City, and may cause termination of the executed Contract for breach, and/or subject the bidder or contractor to contract remedies or other sanctions. The facts supporting the request for changes must not have been known nor reasonably could have been known by the parties prior to entering into the subcontract. Bid shopping is prohibited. The bidder or contractor must negotiate with the subcontractor to resolve the problem. If requested by either party, the Department of Procurement Services shall facilitate such a meeting. Where there has been a mistake or

disagreement about the scope of work, the MBE or WBE can be substituted only where an agreement cannot be reached for a reasonable price for the correct scope of work.

Substitutions of a MBE or WBE subcontractor shall be permitted only on the following basis:

a) Unavailability after receipt of reasonable notice to proceed;

b) Failure of performance;

c) Financial incapacity;

d) Refusal by the subcontractor to honor the bid or proposal price or scope;

e) Mistake of fact or law about the elements of the scope of work of a solicitation where a reasonable price cannot be agreed;

f) Failure of the subcontractor to meet insurance, licensing or bonding requirements;

g) The subcontractor's withdrawal of its bid or proposal; or

h) De-certification of the subcontractor as a MBE or WBE (graduation from the MBE/WBE program does not constitute de-certification).

i) Termination of a Mentor Protégé Agreement.

1.8.2. Procedure for Requesting Approval

If it becomes necessary to substitute a MBE or WBE or otherwise change the Compliance Plan, the procedure will be as follows:

a) The bidder or contractor must notify the Contract Compliance Officer and Chief Procurement Officer in writing of the request to substitute a MBE or WBE or otherwise change the Compliance Plan. The request must state specific reasons for the substitution or change. A letter from the MBE or WBE to be substituted or affected by the change stating that it cannot perform on the contract or that it agrees with the change in its cope of work must be submitted with the request.

b) The City will approve or deny a request for substitution or other change within 15 business days of receipt of the written request.

c) Where the bidder or contractor has established the basis for the substitution to the satisfaction of the Chief Procurement Officer, it must make Good Faith Efforts to meet the Contract Specific Goal by substituting a MBE or WBE subcontractor. Documentation of a replacement MBE or WBE, or of Good Faith Efforts, must meet the requirements in section 5. If the MBE or WBE Contract Specific Goal cannot be reached and Good Faith Efforts have been made, as determined by the Chief Procurement Officer, the bidder or contractor may substitute with a non-MBE or non-WBE.

d) If a bidder or contractor plans to hire a subcontractor for any scope of work that was not previously disclosed in the Compliance Plan, the bidder or contractor must obtain the approval of the Chief Procurement Officer to modify the Compliance Plan and must make Good Faith Efforts to ensure that MBEs or WBEs have a fair opportunity to bid on the new scope of work.

e) A new subcontract must be executed and submitted to the Contract Compliance Officer within five business days of the bidder's or contractor's receipt of City approval for the substitution or other change.

The City shall not be required to approve extra payment for escalated costs incurred by the contractor when a substitution of subcontractors becomes necessary to comply with MBE/WBE contract requirements.

1.9. **Non-Compliance and Damages**

Without limitation, the following shall constitute a material breach of this contract and entitle the City to declare a default, terminate the contract, and exercise those remedies provided for in the contract, at law or in equity: (1) failure to demonstrate Good Faith Efforts; and (2) disqualification as a MBE or WBE of the contractor or any joint venture partner, subcontractor or supplier if its status as an MBE or WBE was a factor in the award of the contract and such status was misrepresented by the contractor.

Payments due to the contractor may be withheld until corrective action is taken.

Pursuant to MCC 2-92-445 or 2-92-740, as applicable, remedies or sanctions may include a penalty in the amount of the discrepancy between the amount of the commitment in the Compliance Plan, as such amount may be amended through

change orders or otherwise over the term of the contract, and the amount paid to MBEs or WBEs, and disqualification from contracting or subcontracting on additional City contracts for up to three years. The consequences provided herein shall be in addition to any other criminal or civil liability to which such entities may be subject.

The contractor shall have the right to protest the final determination of non-compliance and the imposition of any penalty by the Chief Procurement Officer pursuant to MCC 2-92-445 or 2-92-740, within 15 business days of the final determination.

1.10. **Arbitration**

a) In the event a contractor has not complied with the contractual MBE/WBE percentages in its Schedule D, underutilization of MBEs/WBEs shall entitle the affected MBE/WBE to recover from the contractor damages suffered by such entity as a result of being underutilized; provided, however, that this provision shall not apply to the extent such underutilization occurs pursuant to a waiver or substitution approved by the City. The Ordinance and contracts subject thereto provide that any disputes between the contractor and such affected MBEs/WBEs regarding damages shall be resolved by binding arbitration before an independent arbitrator other than the City, with reasonable expenses, including attorney's fees, being recoverable by a prevailing MBE/WBE in accordance with these regulations. This provision is intended for the benefit of any MBE/WBE affected by underutilization and grants such entity specific third party beneficiary rights. Any rights conferred by this regulation are non-waivable and take precedence over any agreement to the contrary, including but not limited to those contained in a subcontract, suborder, or communicated orally between a contractor and a MBE/WBE.

b) An MBE/WBE desiring to arbitrate shall contact the contractor in writing to initiate the arbitrative process. Except as otherwise agreed to in writing by the affected parties subject to the limitation contained in the last sentence of the previous paragraph, within ten (10) calendar days of the contractor receiving notification of the intent to arbitrate from the MBE/WBE the above-described disputes shall be arbitrated in accordance with the Commercial Arbitration Rules of the American Arbitration Association (AAA), a not-for-profit agency, with an office at 225 North Michigan Avenue, Suite 2527, Chicago, Illinois 60601-7601 [Phone: (312) 616-6560; Fax: (312) 819-0404]. All such arbitrations shall be initiated by the MBE/WBE filing a demand for arbitration with the AAA; shall be conducted by the AAA; and held in Chicago, Illinois.

c) All arbitration fees are to be paid pro rata by the parties, however, that the arbitrator is authorized to award reasonable expenses, including attorney and arbitrator fees, as damages to a prevailing MBE/WBE.

d) The MBE/WBE must send the City a copy of the Demand for Arbitration within ten (10) calendar days after it is filed with the AAA. The MBE/WBE also must send the City a copy of the decision of the arbitrator within ten (10) calendar days of receiving such decision. Judgment upon the award rendered by the arbitrator may be entered in any court of competent jurisdiction.

1.11. **Equal Employment Opportunity**

Compliance with MBE and WBE requirements will not diminish or supplant equal employment opportunity and civil rights provisions as required by law.

XII. Information Sources

Small business guaranteed loans; surety bond guarantees; 8 (a) certification:

U.S. Small Business Administration
500 W. Madison Street, Suite 1250
Chicago, Illinois 60661
General Information
(312) 353-4528
(312) 353-4003

S.B.A. - Bond Guarantee Program
Surety Bonds
500 West Madison, Suite 1250
Chicago, Illinois 60661
Attention: Carole Harris

S.B.A. - Procurement Assistance
500 West Madison, Suite 1250
Chicago, Illinois 60661
Attention: Robert P. Murphy, Area Regional Administrator
(312) 353-7381

Project information and general MBE/WBE information:

City of Chicago
Department of Procurement
Contract Administration Division
City Hall - Room 403
Chicago, Illinois 60602
Attention: Monica Jimenez
(312) 744-0845

Directory of Certified Disadvantaged, Minority and Women Business Enterprises:

City of Chicago
Office of Compliance
Attention: Supplier Diversity Program
333 State Street, Suite 540
Chicago, IL 60604

General Information, Department of Procurement Services: www.cityofchicago.org

Information on MBE/WBE availability in the manufacturing, sales or supplies, and related fields (direct assistance from 42 regional affiliates located throughout the U.S.):

National Minority Suppliers
Development Council, Inc.
1040 Avenue of the Americas, 2nd floor
New York, New York 10018
Attention: Harriet R. Michel
(212) 944-2430

Chicago Minority Business
Development Council
1 East Wacker Drive
Suite 1200
Chicago, Illinois 60601
Attention: Tracye Smith, Executive Director
Phone #: (312) 755-8880
Fax #: (312) 755-8890

Attachment A – Assist Agencies

Alliance of Business Leaders & Entrepreneurs (ABLE)
150 N. Michigan Ave. Suite 2800
Chicago, IL 60601
Phone: (312) 624-7733
Fax: (312) 624-7734
Web: www.ablechicago.com

Alliance of Minority and Female Contractors
c/o Federation of Women Contractors
5650 S. Archer Avenue
Chicago, IL 60638
Phone: (312) 360-1122
Fax: (312) 360-0239

American Brotherhood of Contractors Business Development Center
11509 S. Elizabeth
Chicago, IL 60643
Phone: (773) 928-2225
Fax: (773)928-2209
Web: www.american-brotherhood.org

Asian American Institute
4753 N. Broadway St. Suite 904
Chicago, IL 60640
Phone: (773) 271-0899
Fax: (773) 271-1982
Web: www.aaichicago.org

Association of Asian Construction Enterprises
333 N. Ogden Avenue
Chicago, IL 60607
Phone: (847) 525-9693
Email: nakmancorp@aol.com

Black Contractors United
400 W. 76th Street, Suite 200
Chicago, IL 60620
Phone: (773 483-4000
Fax: (773) 483-4150
Web: www.blackcontractorsunited.com

Chatham Business Association Small Business Development, Inc.
8441 S. Cottage Grove Avenue
Chicago, IL 60619
Phone: (773)994-5006
Fax: (773)994-9871
Web: www.cbaworks.org

Chicago Area Gay & Lesbian Chamber of Commerce
3656 N. Halsted
Chicago, IL 60613
Phone: (773) 303-0167
Fax: (773) 303-0168
Web: www.glchamber.org

Chicago Minority Supplier Development Council, Inc.
105 W. Adams, Suite 2300
Chicago, IL 60603-6233
Phone: (312) 755-8880
Fax: (312) 755-8890
Web: www.chicagomsdc.org

Chicago Urban League
4510 S. Michigan Ave.
Chicago, IL 60653
Phone: (773) 285-5800
Fax: (773) 285-7772
Web: www.cul-chicago.org

Cosmopolitan Chamber of Commerce
203 N. Wabash, Suite 518
Chicago, IL 60601
Phone: (312) 499-0611
Fax: (312) 332-2688
Web: www.cosmochamber.org

Federation of Women Contractors
5650 S. Archer Avenue
Chicago, IL 60638
Phone: (312) 360-1122
Fax: (312) 360-0239
Web: www.fwcchicago.com

Hispanic American Construction Industry Association (HACIA)
901 West Jackson Boulevard, Suite 205
Chicago, IL 60607
Phone: (312) 666-5910
Fax: (312) 666-5692
Web: www.haciaworks.org

Illinois Hispanic Chamber of Commerce
855 W. Adams, Suite 100
Chicago, IL 60607
Phone: (312) 425-9500
Fax: (312) 425-9510
Web: www.ihccbusiness.net

Latin American Chamber of Commerce
3512 West Fullerton Avenue
Chicago, IL 60647
Phone: (773) 252-5211
Fax: (773) 252-7065
Web: www.latinamericanchamberofcommerce.com

National Association of Women Business Owners
Chicago Chapter
230 E. Ohio, Suite 400
Chicago, IL 60611
Phone: (312) 224-2605
Fax: (312) 6448557
Web: www.nawbochicago.org

Rainbow/PUSH Coalition
International Trade Bureau
930 E. 50th Street Chicago,
IL 60615
Phone: (773) 256-2781
Fax: (773) 373-4104
Web: www.rainbowpush.org

Suburban Minority Contractors Association
1250 Grove Ave. Suite 200
Barrington, IL 60010
Phone: (847) 852-5010
Fax: (847) 382-1787
Web: www.suburbanblackcontractors.org

Uptown Center Hull House
4520 N. Beacon Street
Chicago, IL 60640
Phone: (773) 561-3500
Fax: (773) 561-3507
Web: www.hullhouse.org

Women Construction Owners & Executives (WCOE)
Chicago Caucus
308 Circle Avenue
Forest Park, IL 60130
Phone: (708) 366-1250
Fax: (708) 366-5418
Web: www.wcoeusa.org

Women's Business Development Center
8 South Michigan Ave., Suite 400
Chicago, IL 60603
Phone: (312) 853-3477
Fax: (312) 853-0145
Web: www.wbdc.org

Chicago Women in Trades (CWIT)
4425 S. Western Blvd.
Chicago, IL 60609-3032
Phone: (773) 376-1450
Fax: (312) 942-0802
Web: www.chicagowomenintrades.org

Coalition for United Community Labor Force
1253 W. 63rd Street
Chicago, IL 60636
Phone: (312) 243-5149

Illinois Black Chamber of Commerce
331 Fulton Street, Suite 530
Peoria, IL 61602
Phone: (309) 740-4430
Fax: (309) 672-1379
www.ilbcc.org

Englewood Black Chamber of Commerce
P.O. Box 21453
Chicago, IL 60621

South Shore Chamber, Incorporated
Black United Funds Bldg.
1750 E. 71st Street
Chicago, IL 60649-2000
Phone: (773) 955- 9508

United Neighborhood Organization (UNO)
954 W. Washington Blvd., 3rd Floor
Chicago, IL 60607
Phone: (312) 432-6301
Fax: (312) 432-0077
Web: www.uno-online.org

National Organization of Minority Engineers
33 West Monroe Suite 1540
Chicago, Illinois 60603
Phone: (312) 425-9560
Fax: (312) 425-9564
Web: www.nomeonline.org

Attachment B - Sample Format for Requesting Assist Agency Comments on Bidder's Request for Reduction or Waiver of MBE/WBE Goals

On Bidder/Proposer's Letterhead – SEND TO THE ASSIST AGENCIES – DO NOT SEND TO THE CITY

RETURN RECEIPT REQUESTED

(Date)

Specification No.: {Specification Number}
Project Description: {PROJECT DESCRIPTION}

(Assist Agency Name and Address – **SEND TO THE ASSIST AGENCIES – DO NOT**

SEND TO THE CITY) Dear_____:

_____(Bidder/Proposer) intends to submit a bid/proposal in response to the above referenced specification with the City of Chicago. Bids are due_____advertised specification with the City of Chicago.

The following areas have been identified for subcontracting opportunities on both a direct and indirect basis:

_____

_____

_____

Our efforts to identify potential subcontractors have not been successful in order to meet the Disadvantaged/ Minority/Women Business Enterprise contract goal. **Due to the inability to identify an appropriate DBE/MBE/WBE firm certified by the City of Chicago to participate as a subcontractor or joint venture partner, a request for the waiver of the contract goals will be submitted.** If you are aware of such a firm, please contact

_____

Name of Company Representative at Address/Phone within (10) ten business days of

receipt of this letter.

Under the City of Chicago's MBE/WBE/DBE Ordinance, your agency is entitled to comment upon this waiver request to the City of Chicago. Written comments may be directed within ten (10) working days of your receipt of this letter to:

Monica Jimenez, Deputy
Procurement Officer Department of
Procurement Services
City of Chicago
121 North La Salle
Street, Room 806
Chicago, Illinois 60602

If you wish to discuss this matter, please contact the undersigned at_____. Sincerely,

SCHEDULE C-1

MBE/WBE Letter of Intent to Perform as a Subcontractor, Supplier, or Consultant

FOR NON-CONSTRUCTION PROJECTS ONLY

Project Name:_____ Specification No.:_____

From:_____
(Name of MBE/WBE Firm)

To:_____and the City of Chicago.
(Name of Prime Contractor)

The MBE or WBE status of the undersigned is confirmed by the attached City of Chicago or Cook County, Illinois Certification Letter. 100% MBE or WBE participation is credited for the use of a MBE or WBE "manufacturer." 60% participation is credited for the use of a MBE or WBE "regular dealer."

The undersigned is prepared to perform the following services in connection with the above named project/contract. If more space is required to fully describe the MBE or WBE proposed scope of work and/or payment schedule, including a description of the commercially useful function being performed. Attach additional sheets as necessary:

_____
_____
_____

The above described performance is offered for the following price and described terms of payment:

_____
_____
_____

SUB-SUBCONTRACTING LEVELS

A zero (0) must be shown in each blank if the MBE or WBE will not be subcontracting any of the work listed or attached to this schedule.

_____ % of the dollar value of the MBE or WBE subcontract that will be subcontracted to non MBE/WBE contractors.

_____ % of the dollar value of the MBE or WBE subcontract that will be subcontracted to MBE or WBE contractors.

NOTICE: If any of the MBE or WBE scope of work will be subcontracted, list the name of the vendor and attach a brief explanation, description and pay item number of the work that will be subcontracted. MBE/WBE credit will not be given for work subcontracted to Non-MBE/WBE contractors, except for as allowed in the Special Conditions Regarding Minority Business Enterprise Commitment and Women Business Enterprise Commitment.

The undersigned will enter into a formal written agreement for the above work with you as a Prime Contractor, conditioned upon your execution of a contract with the City of Chicago, within three (3) business days of your receipt of a signed contract from the City of Chicago.

The undersigned has entered into a formal written mentor protégé agreement as a subcontractor/protégé with you as a Prime Contractor/mentor: ( ) Yes ( ) No

NOTICE: THIS SCHEDULE AND ATTACHMENTS REQUIRE ORIGINAL SIGNATURES.

a) _____
(Signature of President/Owner/CEO or Authorized Agent of MBE/WBE) (Date)

b) _____
c) (Name/Title-Please Print)

_____
d) (Email & Phone Number)

SCHEDULE D-1
Compliance Plan Regarding MBE/WBE Utilization
Affidavit of Prime Contractor

FOR NON-CONSTRUCTION PROJECTS ONLY

MUST BE SUBMITTED WITH THE BID. FAILURE TO SUBMIT THE SCHEDULE D-1 WILL CAUSE THE BID TO BE REJECTED. DUPLICATE AS NEEDED.

Project Name:_____

Specification No.:_____

e) In connection with the above captioned contract, I HEREBY DECLARE AND AFFIRM that I am a duly authorized representative of _____.
(Name of Prime Consultant/Contractor)
and that I have personally reviewed the material and facts set forth herein describing our proposed plan to achieve the MBE/WBE goals of this contract.

All MBE/WBE firms included in this plan have been certified as such by the City of Chicago and/or Cook County, Illinois (Letters of Certification Attached).

I. Direct Participation of MBE/WBE Firms:

NOTE: The bidder/proposer shall, in determining the manner of MBE/WBE participation, first consider involvement with MBE/WBE firms as joint venture partners, subcontractors, and suppliers of goods and services directly related to the performance of this contract.

A. If bidder/proposer is a joint venture and one or more joint venture partners are certified MBEs or WBEs, attach copies of Letters of Certification, Schedule B form and a copy of Joint Venture Agreement clearly describing the role of each MBE/WBE firm(s) and its ownership interest in the joint venture.

B. Complete this section for each MBE/WBE Subcontractor/Supplier/Consultant participating on this contract:

1. Name of MBE/WBE:_____

Address:_____

Contact Person:_____

Phone Number:_____

Dollar Value of Participation $_____

Percentage of Participation %_____

Mentor Protégé Agreement (attach executed copy): ( ) Yes ( ) No Add'l Percentage Claimed:[1]_____%

Total Participation %_____

2. Name of MBE/WBE:_____

Address:_____

1 The Prime Contractor may claim an additional 0.333 percent participation credit (up to a maximum of five (5) percent) for every one (1) percent of the value of the contract performed by the MBE/WBE protégé firm.

Contact Person:_____

Phone Number:_____

Dollar Value of Participation $_____

Percentage of Participation %_____

Mentor Protégé Agreement (attach executed copy): ( ) Yes ( ) No Add'l Percentage Claimed:_____%

Total Participation %_____

3. Name of MBE/WBE:_____

Address:_____

Contact Person:_____

Phone Number:_____

Dollar Value of Participation $_____

Percentage of Participation %_____

Mentor Protégé Agreement (attach executed copy): ( ) Yes ( ) No Add'l Percentage Claimed:_____%

Total Participation %_____

4. Name of MBE/WBE:_____

Address:_____

Contact Person:_____

Phone Number:_____

Dollar Value of Participation $_____

Percentage of Participation %_____

Mentor Protégé Agreement (attach executed copy): ( ) Yes ( ) No Add'l Percentage Claimed:_____%

Total Participation %_____

5. Attach Additional Sheets as Needed

II. Indirect Participation of MBE/WBE Firms

f) **NOTE:** This section need not be completed if the MBE/WBE goals have been met through the direct participation outlined in Section I. If the MBE/WBE goals have not been met through direct participation, Contractor will be expected to demonstrate that the proposed MBE/WBE direct participation represents the maximum achievable under the circumstances. Only after such a demonstration will indirect participation be considered.

MBE/WBE Subcontractors/Suppliers/Consultants proposed to perform work or supply goods or services where such performance does not directly relate to the performance of this contract:

1. Name of MBE/WBE:_____

Address:_____

Contact Person:_____

Phone Number:_____

Dollar Value of Participation $_____

Percentage of Participation %_____

Mentor Protégé Agreement (attach executed copy): ( ) Yes ( ) No Add'l Percentage Claimed:____%

Total Participation %_____

2. Name of MBE/WBE:_____

Address:_____

Contact Person:_____

Phone Number:_____

Dollar Value of Participation $_____

Percentage of Participation %_____

Mentor Protégé Agreement (attach executed copy): ( ) Yes ( ) No Add'l Percentage Claimed:____%

Total Participation %_____

3. Name of MBE/WBE:_____

Address:_____

Contact Person:_____

Phone Number:_____

Dollar Value of Participation $_____

Percentage of Participation %_____

Mentor Protégé Agreement (attach executed copy): ( ) Yes ( ) No Add'l Percentage Claimed:____%

Total Participation %_____

4. Name of MBE/WBE:_____

Address:_____

Contact Person:_____

Phone Number:_____

Dollar Value of Participation $_____

Percentage of Participation %_____

Mentor Protégé Agreement (attach executed copy): ( ) Yes ( ) No Add'l Percentage Claimed:____%

Total Participation %_____

5. Attach Additional Sheets as Needed

III. Summary of MBE/WBE Proposal

A. MBE Proposal **(Direct & Indirect)**

1. MBE Direct Participation

MBE Firm Name	Dollar Amount Participation ($)	Percent Amount Participation (%)
Total Direct MBE Participation		

2. MBE Indirect Participation

MBE Firm Name	Dollar Amount Participation ($)	Percent Amount Participation (%)
Total Indirect MBE Participation		

B. WBE Proposal **(Direct & Indirect)**

1. WBE Direct Participation

WBE Firm Name	Dollar Amount Participation ($)	Percent Amount Participation (%)
Total Direct WBE Participation		

2. WBE Indirect Participation

WBE Firm Name	Dollar Amount Participation ($)	Percent Amount Participation (%)
Total Indirect WBE Participation		

The Prime Contractor designates the following person as its MBE/WBE Liaison Officer:

_____

(Name- Please Print or Type) (Phone)

I DO SOLEMNLY DECLARE AND AFFIRM UNDER PENALTIES OF PERJURY THAT THE CONTENTS OF THE FOREGOING DOCUMENT ARE TRUE AND CORRECT, THAT NO MATERIAL FACTS HAVE BEEN OMITTED, AND THAT I AM AUTHORIZED ON BEHALF OF THE PRIME CONTRACTOR TO MAKE THIS AFFIDAVIT.

_____

(Name of Prime Contractor – Print or Type)

State of:_____

_____

(Signature)

County of:_____

_____

(Name/Title of Affiant – Print or Type)

_____

(Date)

On this_____day of_____, 20_ _, the above signed officer_____

(Name of Affiant)

personally appeared and, known by me to be the person described in the foregoing Affidavit, acknowledged that (s)he executed the same in the capacity stated therein and for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and seal.

_____

(Notary Public Signature)

SEAL:

Commission Expires:_____

Exhibit 4: Economic Disclosure Statement and Affidavit

INSTRUCTIONS FOR COMPLETING ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT (EDS) ON-LINE

The Bidder shall complete an online EDS prior to the bid due date. A Bidder who does not file an electronic EDS prior to the bid due date may be found non-responsive and its bid rejected. If you are unable to complete the online EDS and print a Certificate of Filing prior to the bid due date, the City will accept a paper EDS provided written justification is provided with the bid explaining the Bidders good faith efforts to complete it before the bid due date and the reasons why it could not be completed.

1.1. *ONLINE EDS FILING REQUIRED PRIOR TO BID OPENING*

The Proposer must complete an online EDS prior to the bid opening date.

A Proposer that does not file an electronic EDS prior to the bid opening will be found non- responsive and its bid will be rejected, unless a paper EDS and justification is submitted with the bid as described above. Paper EDS forms may be obtained on the City's website at:

http://www.cityofchicago.org/city/en/depts/dps/provdrs/comp/svcs/economic_disclosurestatements_eds.html

1.2. *ONLINE EDS WEB LINK*

The web link for the Online EDS is https://webapps.cityofchicago.org/EDSWeb

1.3. *ONLINE EDS NUMBER*

Upon completion of the online EDS submission process, the Proposer will be provided an EDS number. Bidders should provide this number here:

EDS Number: _____

1.4. *ONLINE EDS CERTIFICATION OF FILING*

Upon completion of the online submission process, the Proposer will be able to print a hard copy Certificate of Filing. The Proposer should submit the signed Certificate of Filing with its bid. Please insert your Certification of Filing following this page.

A Proposer that does not include a signed Certificate of Filing with its bid must provide it upon the request of the Chief Procurement Officer.

1.5. *PREPARATION CHECKLIST FOR REGISTRATION*

To expedite and ease your registration process, we recommend that you collect the following information prior to registering for an Online EDS user account:

	1. Invitation number, if you were provided an invitation number.
	2. EDS document from previous years, if available.

	3. Email address to correspond with the Online EDS system.
	4. Company Information:
	a. Legal Name
	b. FEIN/SSN
	c. City of Chicago Vendor Number, if available.
	d. Address and phone number information that you would like to appear on your EDS documents.
	e. EDS Captain. Check for an EDS Captain in your company - this maybe the person that usually submits EDS for your company, or the first person that registers for your company.

1.6. *PREPARATION CHECKLIST FOR EDS SUBMISSION*

To expedite and ease your EDS submission, we recommend that you collect the following information prior to updating your EDS information online.

Items #1 through #7 are needed for both EDS information updates and contract related EDS documents:

_____ 1. Invitation number, if you were provided with an invitation number.

_____ 2. Site address that is specific to this EDS.

_____ 3. Contact that is responsible for this EDS.

_____ 4. EDS document from previous years, if available.

_____ 5. Ownership structure, and if applicable, owners' company information:

_____ a. % of ownership

_____ b. Legal Name

_____ c. FEIN/SSN

_____ d. City of Chicago Vendor Number, if available.

_____ e. Address

_____ 6. List of directors, officers, titleholders, etc. (if applicable).

_____ 7. For partnerships/LLC/LLP/Joint ventures, etc.:

_____ a. List of controlling parties (if applicable).

Items #8 and #9 are needed ONLY for contract related EDS documents:

_____ 8. Contract related information (if applicable):

_____ a. City of Chicago contract package

_____ b. Cover page of City of Chicago bid/solicitation package

_____

c. If EDS is related to a mod, then cover page of
_____ your current contract with the City.

_____ 9. List of subcontractors and retained parties:

_____ a. Name

_____ b. Address

_____ c. Fees – Estimated or paid

1.7. *EDS FREQUENTLY ASKED QUESTIONS*

Q: Where do I file?

A: The web link for the Online EDS is https://webapps.cityofchicago.org/EDSWeb

Q: How do I get help?

A: If there is a question mark on a page or next to a field, click on the question mark for help filling out the page or field. You may also consult the User Manual and the Training Videos available on the left menu.

Q: Why do I have to submit an EDS?

A: The Economic Disclosure Statement (EDS) is required of applicants making an application to the City for action requiring City Council, City department or other City agency approval. For example, all bidders seeking a City contract are required to submit an EDS. Through the EDS, applicants make disclosures required by State law and City ordinances and certify compliance with various laws and ordinances. An EDS is also required of certain parties related to the applicant, such as owners and controlling parties.

Q: Who is the Applicant?

A: "Applicant" means any entity or person making an application to the City for action requiring City Council or other City agency approval. The applicant does not include owners and parent companies.

Q: Who is the Disclosing Party?

A: "Disclosing Party" means any entity or person submitting an EDS. This includes owners and parent companies.

Q: What is an entity or legal entity?

A: "Entity' or 'Legal Entity" means a legal entity (for example, a corporation, partnership, joint venture, limited liability company or trust).

Q: What is a person for purposes of the EDS?

A: "Person" means a human being.

Q: Who must submit an EDS?

A. An EDS must be submitted in any of the following three circumstances:

Applicants:	An Applicant must always file this EDS. If the Applicant is a legal entity, state the full name of that legal entity. If the Applicant is a person acting on his/her own behalf, state his/her name.
Entities holding an interest:	Whenever a legal entity has a beneficial interest (E. G. direct or indirect ownership) of more than 7.5% in the Applicant, each such legal entity must file an EDS on its own behalf.
Controlling entities:	Whenever a Disclosing Party is a general partnership, limited partnership, limited liability company, limited liability partnership or joint venture that has a general partner, managing member, manager or other entity that can control the day-to-day management of the Disclosing Party, that entity must also file an EDS on its own behalf. Each entity with a beneficial interest of more than 7.5% in the controlling entity must also file an EDS on its own behalf.

Q: What information is needed to submit an EDS?

A: The information contained in the Preparation Checklist for EDS submission.

Q: I don't have a user ID & password. Can I still submit an Online EDS?

A: No. You must register and create a user ID and password before submitting an Online EDS.

Q: What information is needed to request a user ID & password for Online EDS?

A: The information contained in the Preparation Checklist for Registration is needed to request a login for the Online EDS.

Q: I already have a username and password from another City web site (City Web Portal, Department of Construction and Permits, Department of Consumer Services, etc.). Can I log- in the Online EDS with that account?

A: Usually not. The Online EDS uses a user ID and password system that is shared by the Public Vehicle Advertising and Water Payment web sites. You may use a username and password from those sites by answering "Yes" to "Is this an existing City of Chicago user ID?" when registering. Other usernames and passwords will not be automatically recognized. However, you may choose to create an identical username for the Online EDS if it is not already taken.

Q: I don't have an email address. How do I submit an Online EDS?

A: You cannot get an account to submit an online EDS without an email address. If you need an e-mail address, we suggest that you use a free internet email provider such as www.hotmail.com or

www.yahoo.com or rnail.google.com to open an account. The City does not endorse any particular free internet email provider. Public computers are available at all Chicago Public Library branches.

Q: I forgot my user ID. Can I register again?

A: No. If you are the EDS Captain of your organization, please contact the Department of Procurement Services at 312-744-4900. If you are an EDS team member, contact your EDS Captain, who can look up your user ID.

Q: Who is the EDS Captain?

A: The EDS Captain is a person who performs certain administrative functions for an organization which files an EDS. Each organization registered with the Online EDS has at least one EDS Captain. There may be co-captains, who are all equal. EDS Captains approve new users, change contact information for an organization, and de-active accounts of employees who have left the organization. Please see the User Manual for more information.

Q: Why do we need EDS Captains?

A: The Online EDS is designed to be a self-service web application which allows those doing or seeking to do business with the City to perform as many routine functions as possible without City intervention. Because many organizations have multiple staff filing an EDS, the EDS Captain role allows those organizations to self-manage the contact information and users.

Q: Who is the EDS team?

A: The EDS team for an organization is everyone who is registered to file an EDS on behalf of the organization.

Q: I forgot my password. What should I do?

A: To retrieve a temporary password, click the "Forgot your password?" link on the login page. Enter your user ID that you provided when you registered your account. The system will automatically generate a temporary password and send it to you. When you log-in with your temporary password, you will be asked to create a new password.

Q: How do I complete an Online EDS?

A: Click on "Create New" after logging in. The Online EDS system will walk you through the EDS questions. Please see the User Manual for details.

Q: How do I fill out a Disclosure of Retained Parties?

A: There is no longer a separate Disclosure of Retained Parties filing. After logging in, click on "Create New". Answer (click) "Contract" to "Is this EDS for a contract or an EDS information update?" Click "Fill out EDS", and click on the "Retained Parties" tab. When finished, click on "Ready to Submit."

Q: How do I attach documents?

A: Attachments are discouraged. If at all possible, please provide a concise explanation in the space provided in the online form. Attachments with pages of officers are not acceptable. Names of officers must be typed into the system. If you must provide an attachment for another reason, please send it to your City of Chicago contact (contract administrator or negotiator for procurements) and they will attach it for you. Documents can be sent in PDF (preferred), Word, or paper format.

Q: Who can complete an Economic Disclosure Statement online?

A: Any authorized representative of your business with a user ID and password can complete your EDS online. One person, such as an assistant, can fill in the information and save it, and another person can review and electronically sign the Online EDS.

Q: What are the benefits of filing my Economic Disclosure statement electronically?

A: Filing electronically reduces the chance of filing an incomplete EDS and speeds up the processing of contract awards. A certificate of filing can be printed at the completion of the process and inserted into your bid package. The biggest benefit for those who frequently do business with the City is that after the first EDS, each EDS is much easier to fill out because non-contract specific information is pre-filled from the last submitted EDS.

Q: Will my information be secure?

A: Yes. When making your internet connection to our Web Server, you will connect through a Secure Socket Layer (SSL for short) to the "Online EDS" login page. All information you type will be protected using strong encryption. Within the login page, you will provide us with a user ID, password, and secret question for user authentication, only you will have knowledge of this unique identification information.

Q: I am filing electronically. How do I sign my EDS?

A: Once you have completed the EDS, you will be prompted to enter your password and answer to your secret question. Together, these will serve as your electronic signature. Although you will also print and physically sign an EDS certification of filing as a notice that your EDS was filed, your EDS is complete as a legal document with only the electronic filing.

Q: My address has changed. How can I update my information?

A: You must be an EDS Captain for your organization to update this. Log-in and click on "Vendor Admin, Site Administration." Select the appropriate site and click edit.

Q: I have more questions. How can I contact the Department of Procurement Services?

A: Please contact the contract administrator or negotiator assigned to your solicitation or contract. You may call DPS at 312-744-4900 between 8:30 AM and 5:00 PM Central Time.

Q: Can I save a partially complete EDS?

A: Yes. Click "Save". To avoid data loss, we recommend you save your work periodically while filling out your EDS.

Q: Do I have to re-type my information each time I submit an EDS?

A: No. The system will remember non-contract specific information from your last submitted EDS for one year. This information will be filled-in for you in your new EDS. You will have an opportunity to correct it if it has changed since your last filing. When you submit your new EDS, the information is saved and the one-year clock begins running anew.

Q: What are the system requirements to use the Online EDS?

A: The following are minimum requirements to use the Online EDS:

- A PDF viewer such as Adobe Reader is installed and your web browser is configured to display PDFs automatically. You may download and install Adobe Reader free at www.adobe.com/products/reader/

- Your web browser is set to permit running of JavaScript.

- Your web browser allows cookies to be set for this site. Please note that while we use cookies in the Online EDS, we do not use them to track personally identifiable information, so your privacy is maintained.

- Your monitor resolution is set to a minimum of 1024 x 768.

- While not required to submit an EDS, if you wish to view the training videos, you must have Adobe Flash Plugin version 9 or higher, speakers, and sound. Please note that very old computers may not be able to run Adobe Flash and will not be able to play the training videos. In that case, we encourage you to seek help using the Online EDS Manuals. You may download and install Adobe Flash Plugin free at htty://get.adobe.comiflashplayer

The Online EDS has been tested on Internet Explorer 6.0 and 7.0 and Firefox 2.0 and 3.0 on Windows XIP and Mac OS X. Although it should work on other browsers and operating systems, the City of Chicago cannot guarantee compatibility.

Exhibit 5: Insurance Requirements and Evidence of Insurance

PROFESSIONAL SERVICES INSURANCE REQUIREMENTS
Chicago Department of Aviation
Public Address System Upgrades for O'Hare International Airport

Contractor must provide and maintain at Contractor's own expense, during the term of the Agreement and time period following expiration if Contractor is required to return and perform any of the Services or Additional Services, insurance coverage and requirements specified below, insuring all operations related to the Agreement.

A. INSURANCE TO BE PROVIDED

1) Workers Compensation and Employers Liability

Workers Compensation Insurance, as prescribed by applicable law, covering all employees who are to provide a service under this Agreement and Employers Liability coverage with limits of not less than $1,000,000 each accident, illness or disease.

2) Commercial General Liability (Primary and Umbrella)

Commercial General Liability Insurance or equivalent with limits of not less than $5,000,000 per occurrence for bodily injury, personal injury and property damage liability. Coverages must include the following: All premises and operations, pproducts/completed operations (for a minimum of two (2) years following project completion, if applicable, explosion, collapse, underground, separation of insured, defense and contractual liability (not to include endorsement CG 21 39 or equivalent). The City of Chicago is to be named as an additional insured on a primary, non-contributory basis for any liability arising directly or indirectly from the work or Services.

Subcontractors performing work or Services for the Contractor must maintain limits of not less than $5,000,000 for airside access and $1,000,000 for landside with the same terms herein.

3) Automobile Liability (Primary and Umbrella)

When any motor vehicles (owned, non-owned and hired) are used in connection with work to be performed, Contractor must provide Automobile Liability Insurance with limits of not less than $5,000,000 per occurrence for airside access and $2,000,000 (landside) for bodily injury and property damage. The City of Chicago is to be named as an additional insured on a primary, non-contributory basis.

Subcontractors performing work for the Contractor must maintain limits of not less than $5,000,000 for airside access and $1,000,000 for landside with the same terms herein.

4) Error & Omissions/Professional Liability

When any system technicians, engineers, program/project management professionals or other electronic data processing (EDP) professionals including but not limited to system programmers, hardware and software designers/consultants or other professional consultants perform Services in connection with this Agreement, Professional Liability Insurance covering acts, errors or omissions must be maintained with limits of not less than $2,000,000. Coverage must include performance of or failure to perform EDP, performance of or failure to perform other computer services and failure of software product to perform the function for the purpose intended. When policies are renewed or replaced, the policy retroactive date must coincide with or precede start of work related to the Agreement. A claims-made policy which is not renewed or replaced must have an extended reporting period of three (3) years.

Subcontractors performing professional services for the Contractor must maintain limits of not less than $1,000,000 with the same terms herein.

5) Valuable Papers

When any plans, designs, drawings, specifications, media, data, reports, records and other documents are produced or used under this Agreement, Valuable Papers Insurance must be maintained in an amount to insure against any loss whatsoever and must have limits sufficient to pay for the re-creation and reconstruction of such records.

6) Builders Risk/Installation Floater

When any major repairs are required including rehabilitation, replacement or upgrades of Department of Aviation Public Address System Equipment, All Risk Builders Risk/Installation Insurance must be maintained by the Contractor at full replacement cost insuring loss or damage to City property including Department of Aviation equipment, computer hardware and software devices, materials, parts and supplies that are of the project work during the course of design, development, installation, replacement maintenance or repair. Coverage must include in-transit, offsite, faulty workmanship or materials, mechanical-electrical breakdown and testing. The City of Chicago is to be named as an additional insured and loss payee.

The Contractor is responsible for any damage to City property at full replacement cost during inspection, equipment testing, maintenance and/or repairs of the Department of Aviation Public Address System machinery, equipment and components including replacement parts, materials and supplies that are part of the Agreement and while in the care, custody and control of the Contractor.

Contractor is responsible for all loss or damage to personal property (including but not limited to materials, equipments, tools and supplies), owned, used, by Contractor.

B. ADDITIONAL REQUIREMENTS

Contractor must furnish the City of Chicago, Department of Procurement Services, City Hall, Room 806, 121 North La Salle Street, Chicago, IL 60602, and Chicago Department of Aviation, 10510 W. Zempke Road, 60666 original Certificates of Insurance, or such similar evidence, to be in force on the date of this Agreement, and Renewal Certificates of Insurance, or such similar evidence, if the coverage have an expiration or renewal date occurring during the term of this Agreement. Contractor must submit evidence of insurance on the City of Chicago Insurance Certificate Form (copy attached as Exhibit-) or equivalent prior to execution of Agreement. The receipt of any certificate does not constitute agreement by the City that the insurance requirements in the Agreement have been fully met or that the insurance policies indicated on the certificate are in compliance with all requirements of Agreement. The failure of the City to obtain certificates or other insurance evidence from Contractor is not a waiver by the City of any requirements for the Contractor to obtain and maintain the specified coverage. Contractor must advise all insurers of the Agreement provisions regarding insurance. Non-conforming insurance does not relieve Contractor of the obligation to provide insurance as specified in this Agreement. Non-fulfillment of the insurance conditions may constitute a violation of the Agreement, and the City retains the right to stop work until proper evidence of insurance is provided, or the Agreement may be terminated.

The Contractor must provide for 60 days prior written notice to be given to the City in the event coverage is substantially changed, canceled or non-renewed.

Any deductibles or self-insured retentions on referenced insurance coverage must be borne by Contractor.

The Contractor hereby waives and agrees to require their insurers to waive their rights of subrogation against the City of Chicago, its employees, elected officials, agents, or representatives.

The coverage and limits furnished by Contractor in no way limit the Contractor's liabilities and responsibilities

specified within the Agreement or by law.

Any insurance or self-insurance programs maintained by the City of Chicago do not contribute with insurance provided by Contractor under this Agreement.

The required insurance to be carried is not limited by any limitations expressed in the indemnification language in this Agreement or any limitation placed on the indemnity in this Agreement given as a matter of law.

If Contractor is a joint venture or limited liability company, the insurance policies must name the joint venture or limited liability company as a named insured.

Contractor must require all Subcontractors to provide the insurance required in this Agreement**,** or Contractor may provide the coverage for Subcontractors. All Subcontractors are subject to the same insurance requirements of Contractor unless otherwise specified in this Agreement.

If Contractor or Subcontractors desire additional coverage, the party desiring the additional coverage is responsible for the acquisition and cost.

Notwithstanding any provision in the Agreement to the contrary, The City of Chicago Risk Management Department maintains the right to modify, delete, alter or change these requirements.

Insurance Certificate of Coverage

Named Insured: _____ Specification #: _____

Address: _____ RFP: _____

(Number and Street) Project #: _____

_____ Contract #: _____

(City) (State) (ZIP)

Description of Operation/Location	

The insurance policies and endorsements indicated below have been issued to the designated named insured with the policy limits as set forth herein covering the operation described within the contract involving the named insured and the City of Chicago. The Certificate issuer agrees that in the event of cancellation, non-renewal or material change involving the indicated policies, the issuer will provide at least sixty (60) days prior written notice of such change to the City of Chicago at the address shown on this Certificate. This certificate is issued to the City of Chicago in consideration of the contract entered into with the named insured, and it is mutually understood that the City of Chicago relies on this certificate as a basis for continuing such agreement with the named insured:

Type of Insurance	Insurer Name	Policy Number	Expiration Date	Limits of Liability All Limits in Thousands
General Liability [ ] Claims made [ ] Occurrence [ ] Premise-Operations [ ] Explosion/Collapse Underground [ ] Products/Completed-Operations [ ] Blanket Contractual [ ] Broad Form Property Damage [ ] Independent Contractors [ ] Personal Injury [ ] Pollution				CSL Per Occurrence $ _____ General Aggregate $ _____ Products/Completed Operations Aggregate $ _____
Automobile Liability				CSL Per Occurrence $ _____
[ ] Excess Liability [ ] Umbrella Liability				Each Occurrence $ _____
Worker's Compensation and Employer=s Liability				Statutory/Illinois Employers Liability $ _____
Builders Risk/Course of Construction				Amount of Contract
Professional Liability				$ _____
Owner Contractors Protective				$ _____
Other				$ _____

a) Each Insurance policy required by this agreement, excepting policies for worker=s compensation and professional liability, will read: "The City of Chicago is an additional insured as respects operations and activities of, or on behalf of the named insured, performed under contract with or permit from the City of Chicago."

b) The General, Automobile and Excess/Umbrella Liability Policies described provide for severability of Interest (cross liability) applicable to the named insured and the City.

c) Workers Compensation and Property Insurers shall waive all rights of subrogation against the City of Chicago.

d) The receipt of this certificate by the City does not constitute agreement by the City that the insurance requirements in the contract have been fully met, or that the insurance policies indicated by this certificate are in compliance with all contract requirements.

Name and Address of Certificate Holder and Recipient of Notice	Signature of Authorized Rep. _____ Agency/Company: _____
Certificate Holder/Additional Insured City of Chicago Procurement Department 121 N. LaSalle St., #806 Chicago, IL 60602	Address _____ Telephone _____

For City use only

Name of City Department requesting certificate: (Using Dept.) _____

Address: _____ ZIP Code: _____ Attention: _____

Exhibit 6: Professional Service Agreement

Exhibit 6: Professional Services Contract (Sample)

Spec. No: 124497
P.O. No.: _____
Vendor No.: _____
City-Funded

PROFESSIONAL SERVICES AGREEMENT

BETWEEN

THE CITY OF CHICAGO
DEPARTMENT OF AVIATION

AND

_____

PUBLIC ADDRESS SYSTEM UPGRADES FOR O'HARE INTERNATIONAL AIRPORT

RAHM EMANUEL
MAYOR

Jamie L. Rhee
Chief Procurement Officer

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ARTICLE 1. INTRODUCTION

This Contract is entered into as of the _____ day of _____, 20___ ("Effective Date") by and between _____, a _____ corporation ("Contractor"), and the City of Chicago, a municipal corporation and home rule unit of local government existing under the Constitution of the State of Illinois, acting through its Department of _____ ("City"), at Chicago, Illinois.

The Contractor warrants that it is ready, willing and able to perform as of the effective date of this Contract to the full satisfaction of the City.

NOW, THEREFORE, the City and the Contractor Agree as Follows:

ARTICLE 2. INCORPORATION OF EXHIBITS:

The following attached Exhibits are made a part of this agreement:

- Exhibit 1: Scope of Services and Time Limits for Performance
    - Key Personnel
- Exhibit 2: Schedule of Compensation
- Exhibit 3: Example Insurance Certification and Evidence of Insurance
- Exhibit 4: Economic Disclosure Statement and Affidavit
- Exhibit 5: MBE/WBE Compliance Plan

ARTICLE 3. STANDARD TERMS AND CONDITIONS

3.1. General Provisions

3.1.1. Definitions

"Addendum" is an official revision of the Bid Documents issued by the Chief Procurement Office prior to Bid Opening Date.

"Airports" means Chicago O'Hare International Airport and Chicago Midway International Airport.

"Airside" means, generally, those areas of an Airport which requires a person to pass through a security checkpoint to access. References to "sterile areas" generally mean Airside areas within terminal buildings. References to "Airfield", "Aircraft Operations Area", "AOA", or **"Secured areas"** generally mean outdoor Airside areas or areas not accessible to passengers.

"Attachments" are all the exhibits and other documents attached to the Bid Documents and/or incorporated into the Contract by reference.

"Bid" refers to an offer made by a Bidder in response to an invitation for bids which includes a binding proposal to perform the Contract which the City may rely on and accept, or in the case of an RFP or RFQ, the submission/proposal in response to that solicitation which may be subject to negotiation.

"Bidder" is a person, firm, or entity submitting a Bid in response to an invitation for bids; for RFPs and RFQs, references may be made to "Respondents." Once the Contract is awarded the Contractor shall assume that all references to a Bidder or Respondent and such attendant obligations apply to the Contractor.

"Bid Opening Date" is the date and time publicly advertised by the Chief Procurement Officer as the deadline for submission of Bids; this may be referred to as a "Proposal Due Date" for RFP and RFQ solicitations.

"Bid Documents" means all the documents issued by the Chief Procurement Officer, or referenced by the Chief Procurement Officer as being available on the City's website and incorporated by such reference, in connection with an invitation for bids or proposals. Except for such Bid Documents as are posted on the City's website and incorporated by reference, all Bid Documents must be submitted by a bidder on the Bid Opening Date.

"Business Day" means business days (Monday through Friday, excluding legal holidays, or City shut-down days) in accordance with the City of Chicago business calendar.

"Calendar Day" means all calendar days in accordance with the world-wide accepted calendar.

"Chief Procurement Officer" abbreviated as "CPO" means the chief executive of the City's Department of Procurement Services ("DPS"), and any representative duly authorized in writing to act on the Chief Procurement Officer's behalf.

"**City"** means the City of Chicago, a municipal corporation and home rule government under Sections 1 and 6(a), Article VII, of the 1970 Constitution of the State of Illinois.

"Commissioner" means the chief executive of any City department that participates in this Contract (regardless of the actual title of such chief executive), and any representative duly authorized in writing to act on the Commissioner's behalf with respect to this Contract.

"Contact Person" means the Contractor's management level personnel who will work as liaison between the City and the Contractor and be available to respond to any problems that may arise in connection with Contractor's performance under the Contract.

"Contract" means, upon notice of award from the CPO, the contract consisting of all Bid Documents relating to a specific invitation for bids or proposals, and all amendments, modifications, or revisions made from time to time in accordance with the terms thereof. All such documents comprising the Contract are referred to as the "Contract Documents".

"Contractor" means the Bidder or Proposer (person, firm, or entity) that is awarded the Contract by the CPO. Any references to the Bidder or Proposer in the Contract Documents is understood to apply to the Contractor.

"Department" which may also be referred to as the using/user Department is the City Department which appears on the applicable Purchase Order Release for goods, work, or services provided under this Contract.

"Detailed Specifications" refers to the contract specific requirements that includes but is not limited to a detailed description of the scope, term, compensation, price escalation, and such other additional terms and conditions governing this specific Contract.

"Force Majeure Event" means an event beyond the reasonable control of a party to this Contract, which is limited to acts of God, explosion, acts of the public enemy, fires, floods, earthquakes, tornadoes, epidemics, quarantine restrictions, work stoppages not caused or unmitigated by the Contractor.

"Holidays" refers to the official City Holidays when the City is generally closed for business which includes: New Year's Day, Dr. Martin Luther King Jr.'s Birthday, Lincoln's Birthday, President's Day, Pulaski Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

"MCC" is the abbreviation for the Municipal Code of Chicago.

"Party" or collectively "Parties" refers to the entities that have entered into this Contract including the Contractor and the City.

"Purchase Order" means a written purchase order from a Department referencing this Contract. Purchase Orders may also be referred to as "Blanket Releases".

"Services" refers to all work, services, and materials whether ancillary or as required by the Detailed Specifications that Contractor provides in performance of its obligations under this Contract.

"Specification" means the Bid Documents, including but not limited to the Detailed Specifications.

"Subcontractor" means any person or entity with whom the Contractor contracts to provide any part of the goods, services or work to be provided by Contractor under the Contract, including subcontractors of any tier, suppliers and material men, whether or not in privity with the Contractor.

3.1.2. Interpretation of Contract

3.1.2.1. Order of Precedence

The order of precedence of the component contract parts will be as follows:

- Standard Terms and Conditions
- Addenda, if any
- Plans or drawings, if any
- Detailed Specifications / Scope
- Standard specifications or terms of the City, State, or Federal Government
- Insurance Requirements
- MBE/WBE/DBE Special Conditions, if any
- Invitation to bid and proposal (bid) pages, if applicable
- Performance Bond, if required
- Bid Deposit, if required

3.1.2.2. Interpretation and Rules

Unless a contrary meaning is specifically noted elsewhere, the phrases "as required", "as directed", "as permitted", and similar words mean the requirements, directions, and permissions of the Commissioner or CPO, as applicable. Similarly, the words "approved", "acceptable", "satisfactory", and similar words mean approved by, acceptable to, or satisfactory to the Commissioner or the CPO, as applicable.

The words "necessary", "proper", or similar words used with respect to the nature or extent of work or services mean that work or those services must be conducted in a manner, or be of a character which is necessary or proper for the type of work or services being provided in the opinion of the Commissioner and the CPO, as applicable. The judgment of the Commissioner and the CPO in such matters will be considered final.

Wherever the imperative form of address is used, such as "provide equipment required" it will be understood and agreed that such address is directed to the Contractor unless the provision expressly states that the City will be responsible for the action.

3.1.2.3. Severability
The invalidity, illegality, or unenforceability of any one or more phrases, sentences, clauses, or sections in this Contract does not affect the remaining portions of this Contract.

3.1.2.4. Entire Contract
The Contract Documents constitute the entire agreement between the parties and may not be modified except by the subsequent written agreement of the parties.

3.1.3. Subcontracting and Assignment

3.1.3.1. No Assignment of Contract
Pursuant to 65 ILCS 8-10-14, Contractor may not assign this Contract without the prior written consent of the CPO. In no case will such consent relieve the Contractor from its obligations, or change the terms of the Contract. The Contractor must notify the CPO, in writing, of the name of any proposed assignee and the reason for the assignment; consent to which is solely in the CPO's discretion.

3.1.3.2. Subcontracts
No part of the goods, work, or services to be provided under this Contract may be subcontracted without the prior written consent of the CPO; but in no case will such consent relieve the Contractor from its obligations, or change the terms of the Contract. The Contractor must notify the CPO of the names of all Subcontractors to be used and shall not employ any that the CPO has not approved. Prior to proposing the use of a certain Subcontractor, the Contractor must verify that neither the Subcontractor nor any of its owners is debarred from or otherwise ineligible to participate on City contracts. This information can be found on the City's website: http://www.cityofchicago.org/city/en/depts/dps/provdrs/comp/svcs/debarred_firms_list.html

Subcontracting of the services or work or any portion of the Contract without the prior written consent of the CPO is null and void. Further, the Contractor will not make any substitution of a previously approved Subcontractor without the prior written consent of the CPO; any substitution of a Subcontractor without the prior written consent of the CPO is null and void.

The Contractor will only subcontract with competent and responsible Subcontractors. If, in the judgment of the Commissioner or the CPO, any Subcontractor is careless, incompetent, violates safety or security rules, obstructs the progress of the services or work, acts contrary to instructions, acts improperly, is not responsible, is unfit, is incompetent, violates any laws applicable to this Contract, or fails to follow the requirements of this Contract, then the Contractor will, immediately upon notice from the Commissioner or the CPO, discharge or otherwise remove such Subcontractor and propose an acceptable substitute for CPO approval.

3.1.3.3. No Pledging or Assignment of Contract Funds Without City Approval
The Contractor may not pledge, transfer, or assign any interest in this Contract or contract funds due or to become due without the prior written approval of the CPO. Any such attempted pledge, transfer, or assignment, without the prior written approval of the CPO is void as to the City and will be deemed an event of default under this Contract.

3.1.3.4. City's Right to Assign

The City expressly reserves the right to assign or otherwise transfer all or any part of its interests in this Contract without the consent or approval of the Contractor.

3.1.3.5. Assigns

All of the terms and conditions of this Contract are binding upon and inure to the benefit of the parties hereto and their respective legal representatives, successors, transferees, and assigns.

3.1.4. Contract Governance

3.1.4.1. Governing Law and Jurisdiction

This Contract will be governed in accordance with the laws of the State of Illinois, without regard to choice of law principles. The Contractor hereby irrevocably submits, and will cause its Subcontractors to submit, to the original jurisdiction of those State or Federal courts located within the County of Cook, State of Illinois, with regard to any controversy arising out of, relating to, or in any way concerning the execution or performance of this Contract and irrevocably agrees to be bound by any final judgment rendered thereby from which no appeal has been taken or is available. The Contractor irrevocably waives any objection (including without limitation any objection of the laying of venue or based on the grounds of forum non conveniens) which it may now or hereafter have to the bringing of any action or proceeding with respect to this Contract in the jurisdiction set forth above.

3.1.4.2. Consent to Service of Process

The Contractor agrees that service of process on the Contractor may be made, at the option of the City, either by registered or certified mail addressed to the applicable office as provided for in this Contract, by registered or certified mail addressed to the office actually maintained by the Contractor, or by personal delivery on any officer, director, or managing or general agent of the Contractor. The Contractor designates and appoints the representative identified on the signature page hereto under the heading "Designation of Agent for Service Process", as its agent in Chicago, Illinois, to receive on its behalf service of all process (which representative will be available to receive such service at all times), such service being hereby acknowledged by such representative to be effective and binding service in every respect. Said agent may be changed only upon the giving of written notice by the Contractor to the City of the name and address of a new Agent for Service of Process who works within the geographical boundaries of the City of Chicago. Nothing herein will affect the right to serve process in any other manner permitted by law or will limit the right of the City to bring proceedings against the Contractor in the courts of any other jurisdiction.

3.1.4.3. Cooperation by Parties and between Contractors

The Parties hereby agree to act in good faith and cooperate with each other in the performance of this Contract. The Contractor further agrees to implement such measures as may be necessary to ensure that its staff and its Subcontractors will be bound by the provisions of this Contract. The City will be expressly identified as a third party beneficiary in the subcontracts and granted a direct right of enforcement thereunder.

Unless otherwise provided in Detailed Specifications, if separate contracts are let for work within or adjacent to the project site as may be further detailed in the Contract Documents, each Contractor must perform its Services so as not to interfere with or hinder the progress of completion of the work being performed by other contractors.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with its contract, and shall protect and hold harmless the City from any and all damages or claims that may arise because of inconvenience, delay, or loss experienced by the Contractor because of the presence and operations of other contractors working within the limits of its work or Services. Each Contractor shall assume all responsibility for all work not completed or accepted because of the presence and operations of other contractors.

The Contractor must as far as possible, arrange its work and space and dispose of the materials being used, so as not to interfere with the operations of the other contractors within or adjacent to the limits of the project site.

3.1.4.4. No Third Party Beneficiaries
The parties agree that this Contract is solely for the benefit of the parties and nothing herein is intended to create any third party beneficiary rights for subcontractors or other third parties.

3.1.4.5. Independent Contractor
This Contract is not intended to and does not constitute, create, give rise to, or otherwise recognize a joint venture, partnership, corporation or other formal business association or organization of any kind between Contractor and the City. The rights and the obligations of the parties are only those set forth in this Contract. Contractor must perform under this Contract as an independent contractor and not as a representative, employee, agent, or partner of the City.

This Contract is between the City and an independent contractor and, if Contractor is an individual, nothing provided for under this Contract constitutes or implies an employer-employee relationship such that:

The City will not be liable under or by reason of this Contract for the payment of any workers' compensation award or damages in connection with the Contractor performing the Services required under this Contract.

Contractor is not entitled to membership in any City Pension Fund, Group Medical Insurance Program, Group Dental Program, Group Vision Care, Group Life Insurance Program, Deferred Income Program, vacation, sick leave, extended sick leave, or any other benefits ordinarily provided to individuals employed and paid through the regular payrolls of the City.

The City is not required to deduct or withhold any taxes, FICA or other deductions from any compensation provided to Contractor.

3.1.4.6. Authority
Execution of this Contract by the Contractor is authorized and signature(s) of each person signing on behalf of the Contractor have been made with complete and full authority to commit the Contractor to all terms and conditions of this Contract, including each and every representation, certification, and warranty contained herein, attached hereto and collectively incorporated by reference herein, or as may be required by the terms and conditions hereof. If other than a sole proprietorship, Contractor must provide satisfactory evidence that the execution of the Contract is authorized in accordance with the business entity(s rules and procedures.

3.1.4.7. Joint and Several Liability
In the event that Contractor, or its successors or assigns, if any, is comprised of more than one individual or other legal entity (or a combination thereof), then and in that event, each and every obligation or undertaking herein stated to be fulfilled or performed by Contractor will be the joint and several obligation or undertaking of each such individual or other legal entity.

3.1.4.8. Notices
All communications and notices to the City from the Contractor must be faxed, delivered personally, electronically mailed or mailed first class, postage prepaid, to the Commissioner of the using Department that appears on the applicable Purchase Order, with a copy to the Chief Procurement Officer, Room 806, City Hall, 121 N. LaSalle Street, Chicago, Illinois 60602.

A copy of any communications or notices to the City relating to Contract interpretation, a dispute, or indemnification obligations shall also be sent by the same means set forth above to the Department of Law, Room 600, City Hall, 121 N LaSalle Street, Chicago, Illinois 60602.

All communications and notices from the City to the Contractor, unless otherwise provided for, will be faxed, delivered personally, electronically mailed or mailed first class, postage prepaid, to the

Contractor care of the name and to the address listed on the Bid Documents' proposal page. If this contract was awarded through a process that does not use bid or proposal documents, notices to contractor will be sent to an address specified in the Contract.

3.1.4.9. Amendments
Following Contract award, no change, amendment, or modification of the Contract Documents or any part thereof, is valid unless stipulated in writing and signed by the Contractor, Mayor, CPO, and Comptroller, unless specifically allowed for by the Contract Documents.

3.1.4.10. No Waiver of Legal Rights
Neither the acceptance by the City, or any representative of the City, nor any payment for or acceptance of the whole or any part of the deliverables, nor any extension of time, nor any possession taken by the City, shall operate as a waiver by the City of any portion of the Contract, or of any power herein reserved or any right of the City to damages herein provided.

A waiver of any breach of the Contract shall not be held to be a waiver of any other or subsequent breach. Whenever under this Contract the City by a proper authority waives the Contractor's performance in any respect or waives a requirement or condition to either the City's or the Contractor's performance, the waiver so granted, whether express or implied, shall only apply to the particular instance and will not be deemed a waiver forever or for subsequent instance of the performance, requirement, or condition. No such waiver shall be construed as a modification of this Contract regardless of the number of time the City may have waived the performance, requirement, or condition.

3.1.4.11. Non-appropriation of Funds
Pursuant to 65 ILCS 5/8-1-7, any contract for the expenditure of funds made by a municipality without the proper appropriation is null and void.

If no funds or insufficient funds are appropriated and budgeted in any fiscal period of the City for payments to be made under this Contract, then the City will notify the Contractor of that occurrence and this Contract shall terminate on the earlier of the last day of the fiscal period for which sufficient appropriation was made or whenever the funds appropriated for payment under this Contract are exhausted.

No payments will be made to the Contractor under this Contract beyond those amounts appropriated and budgeted by the City to fund payments under this Contract.

3.1.4.12. Participation By Other Government Agencies
Other Local Government Agencies (defined below) may be eligible to participate in this Contract if (a) such agencies are authorized, by law or their governing bodies, to execute such purchases, (b) such authorization is consented to by the City of Chicago's CPO, and (c) such purchases have no net adverse effect on the City of Chicago and result in no diminished services from the Contractor to the City's Departments.

Examples of such Local Government Agencies are: the Chicago Board of Education, Chicago Park District, City Colleges of Chicago, Chicago Transit Authority, Chicago Housing Authority, Chicago Board of Elections, Metropolitan Pier and Exposition Authority (McCormick Place, Navy Pier), and the Municipal Courts.

Said purchases will be made upon the issuance of a purchase order directly from the Local Government Agency. The City will not be responsible for payment of any amounts owed by any other Local Government Agencies, and will have no liability for the acts or omissions of any other Local Government Agency.

3.1.5. Confidentiality
All deliverables and reports, data, findings or information in any form prepared, assembled or encountered by or provided by Contractor under this Contract are property of the City and are confidential, except as specifically authorized in this Contract or as may be required by law. Contractor

must not allow the Deliverables to be made available to any other individual or organization without the prior written consent of the City. Further, all documents and other information provided to Contractor by the City are confidential and must not be made available to any other individual or organization without the prior written consent of the City. Contractor must implement such measures as may be necessary to ensure that its staff and its Subcontractors are bound by the confidentiality provisions contained in this Contract.

Contractor must not issue any publicity news releases or grant press interviews, and except as may be required by law during or after the performance of this Contract, disseminate any information regarding its Services or the project to which the Services pertain without the prior written consent of the Commissioner.

If Contractor is presented with a request for documents by any administrative agency or with a subpoena duces tecum regarding any records, data or documents which may be in Contractor's possession by reason of this Contract, Contractor must immediately give notice to the Commissioner, CPO and the Corporation Counsel for the City with the understanding that the City will have the opportunity to contest such process by any means available to it before the records or documents are submitted to a court or other third party. Contractor, however, is not obligated to withhold the delivery beyond the time ordered by the court or administrative agency, unless the subpoena or request is quashed or the time to produce is otherwise extended.

3.1.6. Indemnity

Contractor must defend, indemnify, keep and hold harmless the City, its officers, representatives, elected and appointed officials, agents and employees (collectively, the "Indemnified Parties,") from and against any and all Losses (as defined below), in consequence of the granting of this Contract or arising out of or being in any way connected with the Contractor's performance under this Contract, except as otherwise provided in 740 ILCS 35 "Construction Contract Indemnification for Negligence Act" if it applies, including those related to: injury, death or damage of or to any person or property; any infringement or violation of any property right (including any patent, trademark or copyright); failure to pay or perform or cause to be paid or performed Contractors covenants and obligations as and when required under this Contract or otherwise to pay or perform its obligations to any subcontractor; the City's exercise of its rights and remedies under this Contract; and injuries to or death of any employee of Contractor or any subcontractor under any workers compensation statute. When 740 ILCS 35 applies, indemnification provided by the Contractor to the Indemnified Parties will be to the maximum extent permitted under applicable law.

"Losses" means, individually and collectively, liabilities of every kind, including monetary damages and reasonable costs, payments and expenses (such as, but not limited to, court costs and reasonable attorneys' fees and disbursements), claims, demands, actions, suits, proceedings, fines, judgments or settlements, any or all of which in any way arise out of or relate to the negligent or otherwise wrongful errors, acts, or omissions of Contractor, its employees, agents and subcontractors.

The Contractor will promptly provide, or cause to be provided, to the Commissioner and the Corporation Counsel copies of such notices as Contractor may receive of any claims, actions, or suits as may be given or filed in connection with the Contractor's performance or the performance of any Subcontractor and for which the Indemnified Parties are entitled to indemnification hereunder.

At the City Corporation Counsel's option, Contractor must defend all suits brought upon all such Losses and must pay all costs and expenses incidental to them, but the City has the right, at its option, to participate, at its own cost, in the defense of any suit, without relieving Contractor of any of its obligations under this Contract. Any settlement must be made only with the prior written consent of the City Corporation Counsel, if the settlement requires any action on the part of the City.

The Contractor shall be solely responsible for the defense of any and all claims, demands, or suits against the Indemnified Parties, including without limitation, claims by an employee, subcontractors, agents, or servants of Contractor even though the claimant may allege that the Indemnified Parties were

in charge of the work or service performed under the Contract, that it involves equipment owned or furnished by the Indemnified Parties, or allege negligence on the part of the Indemnified Parties. The City will have the right to require Contractor to provide the City with a separate defense of any such suit.

To the extent permissible by law, Contractor waives any limits to the amount of its obligations to indemnify, defend or contribute to any sums due to third parties arising out of any Losses, including but not limited to any limitations on Contractor's liability with respect to a claim by any employee of Contractor arising under the Workers Compensation Act, 820 ILCS 305/1 *et seq*. or any other related law or judicial decision (such as, *Kotecki v. Cyclops Welding Corporation*, 146 III. 2d 155 (1991)). The City, however, does not waive any limitations it may have on its liability under the Illinois Workers Compensation Act, the Illinois Pension Code or any other statute.

The indemnities in this section survive expiration or termination of this Contract for matters occurring or arising during the term of this Contract or as the result of or during the Contractor's performance of work or services beyond the term. Contractor acknowledges that the requirements set forth in this section to indemnify, keep and save harmless and defend the City are apart from and not limited by the Contractor's duties under this Contract, including the insurance requirements set forth in the Contract.

3.1.7. Non-Liability of Public Officials

Contractor and any assignee or Subcontractor of Contractor must not charge any official, employee or agent of the City personally with any liability or expenses of defense or hold any official, employee or agent of the City personally liable to them under any term or provision of this Contract or because of the City's execution, attempted execution or any breach of this Contract.

3.1.8. Contract Extension Option

The City may extend this Contract once following the expiration of the contract term for up to 181 Calendar Days or until such time as a new contract has been awarded for the purpose of providing continuity of services and/or supply while procuring a replacement contract subject to acceptable performance by the Contractor and contingent upon the appropriation of sufficient funds. The CPO will give the Contractor notice of the City's intent to exercise its option to renew the Contract for the approaching option period.

3.2. Compensation Provisions

3.2.1. Ordering, Invoices, and Payment

3.2.1.1. Purchase Orders

Requests for work, services or goods in the form of a Purchase Order will be issued by the Department and sent to the Contractor to be applied against the Contract. The Contactor must not honor any order(s), perform work or services or make any deliveries of goods without receipt of a Purchase Order issued by the City of Chicago. Any work, services, or goods provided by the Contractor without a Purchase Order is made at the Contractor's risk. Consequently, in the event such Purchase Order is not provided by the City, the Contractor releases the City from any liability whatsoever to pay for any work, services, or goods provided without said Purchase Order.

Purchase Orders will indicate quantities ordered for each line item, unit/total cost, shipping address, delivery date, fund chargeable information, catalog information (if applicable), and other pertinent instructions regarding performance or delivery.

3.2.1.2. Invoices

If required by the Scope of Work / Detailed Specifications, original invoices must be sent by the Contractor to the Department to apply against the Contract. Invoices must be submitted in accordance with the mutually agreed upon time period with the Department. All invoices must be signed, dated and reference the City's Purchase Order number and Contract number. A signed work ticket, time sheets, manufacturer's invoice, if applicable, or any documentation requested by the Commissioner must accompany each invoice. If a Contractor has more than one contract with the City, separate invoices must be prepared for each contract in lieu of combining items from different contracts under the same invoice. Invoice quantities, description of work, services or goods, unit of

measure, pricing and/or catalog information must correspond to the items on the accepted Price List or Proposal Pages or of the Bid Documents. If invoicing Price List/Catalog items, indicate Price List/Catalog number, item number, Price List/Catalog date and Price List/Catalog page number on the invoice.

3.2.1.3. Payment
The City will process payment within sixty (60) calendar days after receipt of invoices and all supporting documentation necessary for the City to verify the satisfactory delivery of work, services or goods to be provided under this Contract.

Contractor may be paid, at the City's option, by electronic payment method. If the City elects to make payment through this method, it will so notify the Contractor, and Contractor agrees to cooperate to facilitate such payments by executing the City's electronic funds transfer form, available for download from the City's website at: http://www.cityofchicago.org/content/dam/city/depts/fin/supp_info/DirectDepositCityVendor.pdf. The City reserves the right to offset mistaken or wrong payments against future payments.

The City will not be obligated to pay for any work, services or goods that were not ordered with a Purchase Order or that are non-compliant with the terms and conditions of the Contract Documents. Any goods, work, or services which fail tests and/or inspections are subject to correction, exchange or replacement at the cost of the Contractor.

3.2.1.4. Electronic Ordering and Invoices
The Contractor will cooperate in good faith with the City in implementing electronic ordering and invoicing, including but not limited to price lists/catalogs, purchase orders, releases and invoices. The electronic ordering and invoice documents will be in a format specified by the City and transmitted by an electronic means specified by the City. Such electronic means may include, but are not limited to, disks, e-mail, EDI, FTP, web sites, and third party electronic services. The CPO reserves the right to change the document format and/or the means of transmission upon written notice to the Contractor. Contractor will ensure that the essential information, as determined by the CPO, in the electronic document, corresponds to that information submitted by the Contractor in its paper documents. The electronic documents will be in addition to paper documents required by this Contract, however, by written notice to the Contractor, the CPO may deem any or all of the electronic ordering and invoice documents the official documents and/or eliminate the requirement for paper ordering and invoice documents.

3.2.1.5. City Right to Offset
The City may offset against any invoice from Contractor any costs incurred by the City as a result of event of default by Contractor under this Contract or otherwise resulting from Contractor's performance or non-performance under this Contract, including but not limited to any credits due as a result of over-billing by Contractor or overpayments made by the City. If the amount offset is insufficient to cover those costs, Contractor is liable for and must promptly remit to the City the balance upon written demand for it. This right to offset is in addition to and not a limitation of any other remedies available to the City.

3.2.1.6. Records
Upon request the Contractor must furnish to the City such information related to the progress, execution, and cost of the Services. All books and accounts in connection with this Contract must be open to inspection by authorized representatives of the City. The Contractor must make these records available at reasonable times during the performance of the Services and will retain them in a safe place and must retain them for at least five (5) years after the expiration or termination of the Contract.

3.2.1.7. Audits
3.2.1.7.1. City's Right to Conduct Audits

The City may, in its sole discretion, audit the records of Contractor or its Subcontractors, or both, at any time during the term of this Contract or within five years after the Contract ends, in connection with the goods, work, or services provided under this Contract. Each calendar year or partial calendar year may be deemed an "audited period".

3.2.1.7.2. Recovery for Over-Billing

If, as a result of such an audit, it is determined that Contractor or any of its Subcontractors has overcharged the City in the audited period, the City will notify Contractor. Contractor must then promptly reimburse the City for any amounts the City has paid Contractor due to the overcharges and, depending on the facts, also some or all of the cost of the audit, as follows:

If the audit has revealed overcharges to the City representing less than 5% of the total value, based on the contract prices, of the goods, work, or services provided in the audited period, then the Contractor must reimburse the City for 50% of the cost of the audit and 50% of the cost of each subsequent audit that the City conducts;

If, however, the audit has revealed overcharges to the City representing 5% or more of the total value, based on the contract prices, of the goods, work, or services provided in the audited period, then Contractor must reimburse the City for the full cost of the audit and of each subsequent audit.

Failure of Contractor to reimburse the City in accordance with the foregoing is an event of default under this Contract, and Contractor will be liable for all of the City's costs of collection, including any court costs and attorneys' fees.

3.2.2. Subcontractor Payment Reports

The Contractor must report payments to Subcontractors on a monthly basis in the form of an electronic report. Upon the first payment issued by the City to the Contractor for services performed, on the first day of each month and every month thereafter, email and/or fax notifications will be sent to the Contractor with instructions to report payments to Subcontractors that have been made in the prior month. This information must be entered into the Certification and Compliance Monitoring System (C2), or whatever reporting system is currently in place, on or before the fifteenth (15th) day of each month.

Once the Contractor has reported payments made to each Subcontractor, including zero dollar amount payments, the Subcontractor will receive an email and/or fax notification requesting that they log into the system and confirm payments received.

All monthly confirmations must be reported on or before the twentieth (20th) day of each month. Contractor and Subcontractor reporting to the C2 system must be completed by the 25th of each month or payments may be withheld.

All contracts between the Contractor and its Subcontractors must contain language requiring the Subcontractors to respond to email and/or fax notifications from the City requiring them to report payments received from the Contractor.

Access to the Certification and Compliance Monitoring System (C2), which is a web-based reporting system, can be found at: https://chicago.mwdbe.com

(Note: This site works for reporting all Subcontractor payments regardless of whether they are MBE/WBE/DBE or non-certified entities.)

If a Subcontractor has satisfactorily performed in accordance with the requirements of the Contract, Contractor must pay Subcontractor for such work, services, or materials within fourteen (14) calendar days of Contractor receiving payment from the City. Failure to comply with the foregoing will be deemed an event of default.

3.2.3. Prompt Payment to Subcontractors

3.2.3.1. Incorporation of Prompt Payment Language in Subcontracts

Contractor must state the requirements of these Prompt Payment provisions in all Subcontracts and purchase orders. If Contractor fails to incorporate these provisions in all Subcontracts and purchase orders, the provisions of this Section are deemed to be incorporated in all Subcontracts and purchase orders. Contractor and the Subcontractors have a continuing obligation to make prompt payment to their respective Subcontractors. Compliance with this obligation is a condition of Contractor's participation and that of its Subcontractors on this Contract.

3.2.3.2. Payment to Subcontractors Within Fourteen Days

The Contractor must make payment to its Subcontractors within 14 days of receipt of payment from the City for each invoice, but only if the Subcontractor has satisfactorily provided goods or services or completed its work or services in accordance with the Contract Documents and provided the Contractor with all of the documents and information required of the Contractor. The Contractor may delay or postpone payment for a to a Subcontractor when the Subcontractor's work or materials do not comply with the requirements of the Contract Documents, the Contractor is acting in good faith, and not in retaliation for a Subcontractor exercising legal or contractual rights.

3.2.3.2.1. Reporting Failures to Promptly Pay

The City posts payments to prime contractors on the web at http://webapps.cityofchicago.org/VCSearchWeb/org/cityofchicago/vcsearch/controller/payments/begin.do?agencyId=city.

If the Contractor, without reasonable cause, fails to make any payment to its Subcontractors and material suppliers within 14 days after receipt of payment under a City contract, the Contractor shall pay to its Subcontractors and material suppliers, in addition to the payment due them, interest in the amount of 2% per month, calculated from the expiration of the 14-day period until fully paid.

In the event that a Contractor fails to make payment to a Subcontractor within the 14-day period required above, the Subcontractor may notify the City by submitting a report form that may be downloaded from the DPS website at:

http://www.cityofchicago.org/content/dam/city/depts/dps/ContractAdministration/StandardFormsAgreements/Failure_to_Promtly_Pay_Fillable_Form_3_2013.pdf

The report will require the Subcontractor to affirm that (a) its invoice to the Contractor was included in the payment request submitted by the contractor to the City and (b) Subcontractor has not, at the time of the report, received payment from the contractor for that invoice. The report must reference the payment (voucher) number posted on-line by the City in the notice of the payment to the contractor.

Subcontractors are hereby reminded that per Chapters 1-21, "False Statements," and 1-22, "False Claims," of the Municipal Code of Chicago, making false statements or claims to the City are violations of law and subject to a range of penalties including fines and debarment.

3.2.3.2.2. Whistleblower Protection

Contractor shall not take any retaliatory action against any Subcontractor for reporting non-payment pursuant to this Sub-Section 3.2.3. Any such retaliatory action is an event of default under this Contract and is subject to the remedies set forth in Section 3.5 hereof, including termination. In addition to those remedies, any retaliatory action by a contractor may result in a contractor being deemed non-responsible for future City contracts or, if, in the sole judgment of the Chief Procurement Officer, such retaliatory action is egregious, the Chief Procurement Officer may initiate debarment proceedings against the contractor. Any such debarment shall be for a period of not less than one year.

3.2.3.3. Liquidated Damages for Failure to Promptly Pay

Much of the City's economic vitality derives from the success of its small businesses. The failure by contractors to pay their subcontractors in a timely manner, therefore, is clearly detrimental to the

City. Inasmuch as the actual damages to the City due to such failure are uncertain in amount and difficult to prove, Contractor and City agree that the Chief Procurement Officer may assess liquidated damages against contractors who fail to meet their prompt payment requirements. Such liquidated damages shall be assessed to compensate the City for any and all damage incurred due to the failure of the Contractor to promptly pay its subcontractors, and does not constitute a penalty. Any and all such liquidated damages collected by the City shall be used to improve the administration and outreach efforts of the City's Small Business Program.

3.2.3.4. Action by the City

Upon receipt of a report of a failure to pay, the City will issue notice to the contractor, and provide the contractor with an opportunity to demonstrate reasonable cause for failing to make payment within applicable period set forth in the Contract. The Chief Procurement Officer, in his or her sole judgment, shall determine whether any cause for nonpayment provided by a contractor is reasonable. In the event that the contractor fails to demonstrate reasonable cause for failure to make payment, the City shall notify the contractor that it will assess liquidated damages. Any such liquidated damages will be assessed according to the following schedule:

First Unexcused Report:	$50
Second Unexcused Report:	$100
Third Unexcused Report:	$250
Fourth Unexcused Report:	$500

3.2.3.5. Direct Payment to Subcontractors By City

The CPO may notify the Contractor that payments to the Contractor will be suspended if the CPO has determined that the Contractor has failed to pay any Subcontractor, employee, or workman, for work performed. If Contractor has not cured a failure to pay a Subcontractor, employee or workman within 10 days after receipt of such notice, the CPO may request the Comptroller to apply any money due, or that may become due, to Contractor under the Contract to the payment of such Subcontractors, workmen, and employees and the effect will be the same, for purposes of payment to Contractor of the Contract Price, as if the City had paid Contractor directly.

Further, if such action is otherwise in the City's best interests, the CPO may (but is not obligated to) request that the Comptroller make direct payments to Subcontractors for monies earned on contracts and the effect will be the same, for purposes of payment to Contractor of the Contract Price, as if the City had paid Contractor directly. The City's election to exercise or not to exercise its rights under this paragraph shall not in any way affect the liability of the Contractor or its sureties to the City or to any such Subcontractor, workman, or employee upon any bond given in connection with such Contract.

3.2.4. General Price Reduction – Automatic Eligibility for General Price Reductions

If at any time after the Bid Opening Date the Contractor makes a general reduction in the price of any goods, services or work covered by the Contract to its customers generally, an equivalent price reduction based on similar quantities and/or considerations shall apply to the Contract for the duration of the contract period (or until the price is further reduced). Such price reduction will be effective at the same time and in the same manner as the reduction in the price to customers generally.

For purpose of this provision, a general price reduction will mean any reduction in the price of an article or service offered (1) to Contractor's customers generally, or (2) in the Contractor's price schedule for the class of customers, i.e., wholesalers, jobbers, retailers, etc., which was used as the basis for bidding on this Contract. An occasional sale at a lower price, or sale of distressed merchandise at a lower price, would not be considered a general price reduction under this provision.

The Contractor must invoice at such reduced prices indicating on the invoice that the reduction is pursuant to the General Price Reduction provision of the Contract. The Contractor, in addition, must within 10 calendar days of any general price reduction notify the CPO of such reduction by letter. Failure to do so will be an event of default. Upon receipt of any such notice of a general price reduction all participating Departments will be duly notified by the CPO.

Failure to notify the CPO of a General Price Reduction is an event of default, and the City's remedies shall include a rebate to the City of any overpayments.

3.3. Compliance With All Laws

3.3.1. General

Contractor must observe and comply with all applicable federal, state, county and municipal laws, statutes, regulations, codes, ordinances and executive orders, in effect now or later and as amended whether or not they appear in the Contract Documents.

Provisions required by law, ordinances, rules, regulations, or executive orders to be inserted in the Contract are deemed inserted in the Contract whether or not they appear in the Contract.

Contractor must pay all taxes and obtain all licenses, certificates, and other authorizations required in connection with the performance of its obligations hereunder, and Contractor must require all Subcontractors to also do so. Failure to do so is an event of default and may result in the termination of this Contract.

3.3.2. Non-Discrimination

3.3.2.1. Federal Affirmative Action

It is an unlawful employment practice for the Contractor (1) to fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, or the terms, conditions, or privileges of his employment, because of such individuals race, color, religion, sex, age, handicap or national origin; or (2) to limit, segregate, or classify his employees or applicants for employment in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individuals race, color, religion, sex, age, handicap or national origin.

Contractor must comply with The Civil Rights Act of 1964, 42 U.S.C. sec. 2000 et seq. (1988), as amended. Attention is called to: Exec. Order No. 11,246,30 Fed. Reg. 12,319 (1965), reprinted in 42 U.S.C. 2000(e) note, as amended by Exec. Order No. 11,375,32 Fed. Reg. 14,303 (1967) and by Exec. Order No. 12,086,43 Fed. Reg. 46,501 (1978); Age Discrimination Act, 42 U.S.C. sec. 61 01-61 06 (1988); Rehabilitation Act of 1973, 29 U.S.C. sec. 793-794 (1988); Americans with Disabilities Act, 42 U.S.C. sec. 12102 et seq.; and 41 C.F.R. Part 60 et seq. (1990); and all other applicable federal laws, rules, regulations and executive orders.

3.3.2.2. Illinois Human Rights Act

Contractor must comply with the Illinois Human Rights Act, 775ILCS 5/1-1 01 et seq., as amended and any rules and regulations promulgated in accordance therewith, including, but not limited to the Equal Employment Opportunity Clause, 445 III. Admin. Code 750 Appendix A.

Contractor must comply with the Public Works Employment Discrimination Act, 775 ILCS 10/0.01 et seq., as amended; and all other applicable state laws, rules, regulations and executive orders.

3.3.2.3. Chicago Human Rights Ordinance MCC Ch. 2-160

Contractor must comply with the Chicago Human Rights Ordinance, MCC Ch. 2-160, Sect. 2-160-010 et seq., as amended; and all other applicable municipal code provisions, rules, regulations and executive orders.

Contractor must furnish or shall cause each of its Subcontractors to furnish such reports and information as requested by the Chicago Commission on Human Relations.

3.3.2.4. Business Enterprises Owned by People With Disabilities (BEPD)

It is the policy of the City of Chicago that businesses certified as a BEPD in accordance with MCC Sect. 2-92-337 et seq., Regulations Governing Certification of BEPDs, and all other Regulations promulgated under the aforementioned sections of the MCC; shall have the full and fair opportunities to participate fully in the performance of this Contract

Contractor shall not discriminate against any person or business on the basis of disability, and shall take affirmative actions to ensure BEPDs shall have full and fair opportunities to compete for and perform subcontracts for supplies or services.

Failure to carry out the commitments and policies set forth herein shall constitute a material breach of the Contract and may result in the termination of the Contract or such remedy as the City deems appropriate.

For purposes of this section only, the following definitions apply:

"Business Enterprises owned by People with Disabilities" or **"BEPD"** has the same meaning ascribed to it in MCC Sect. 2-92-586.

"Bid incentive" means an amount deducted, for bid evaluation purposes only, from the contract base bid in order to calculate the bid price to be used to evaluate the bid on a competitively bid contract.

"Construction project" has the same meaning ascribed to it in MCC Sect. 2-92-335.

"Contract" means any contract, purchase order, construction project, or other agreement (other than a delegate agency contract or lease of real property or collective bargaining agreement) awarded by the City and whose costs is to be paid from funds belonging to or administered by the City.

"Contract base bid" means the total dollar amount a contractor bids on a contract without factoring any bid incentive or percentage reductions to the bid amount.

"Earned credit" means the amount of the bid incentive allocated to a contractor upon completion of a contract in which the contractor met or exceeded his or her goals for the utilization of BEPDs in the performance of the contract.

"Earned credit certificate" means a certificate issued by the Chief Procurement Officer evidencing the amount of earned credit a contractor has been awarded.

The CPO shall award a bid incentive to Contractor for utilization of a BEPD as a prime contractor or subcontractor in accordance with the provisions of this section. The bid incentive shall be earned in the performance of the Contract, provided that the bid incentive earned in the performance of the Contract shall only be applied to a future contract.

Where not otherwise prohibited by federal, state, or local law, the CPO shall allocate to any qualified bidder the following bid incentive for utilization of a BEPD as a prime contractor or subcontractor in the performance of the contract.

% of total dollar contract amount performed by BEPD	*Bid incentive*
2 to 5%	½% of the contract base bid
6 to 10%	1% of the contract base bid
11% or more	2% of the contract base bid

The bid incentive shall be calculated and applied in accordance with the provisions of this section. The bid incentive is used only to calculate an amount to be used in evaluating the bid. The bid incentive does not affect the contract price.

As part of the contract close-out procedure, if the CPO determines that the Contractor has successfully met his or her BEPD utilization goals either as a prime contractor or with subcontractors, the CPO shall issue an earned credit certificate that evidences the amount of earned credits allocated to the Contractor. The Contractor may apply the earned credits as the bid incentive for any future contract bid of equal or less dollar amount. The earned credit certificate is valid for three years from the date of issuance and shall not be applied towards any future contract bid after the expiration of that period.

The Contractor may apply the earned credit certificate on multiple future contract bids during the three-year period in which the certificate is valid, but may only receive one bid incentive for bid evaluation purposes on one contract award. If the Contractor applies the earned credit certificate on multiple contract bids and is the lowest responsive and responsible bidder on more than one contract bid, the earned credit certificate shall be applied to the contract bid first to be advertised by the Department of Procurement Services, or if multiple contract bids were advertised on the same date, the earned credit certificate shall be applied only to the contract bid with the greatest dollar value

The Contractor shall maintain accurate and detailed books and records necessary to monitor compliance with this section and shall submit such reports as required by the CPO, or the commissioner of the supervising department.

Full access to the Contractor's and Subcontractor's records shall be granted to the CPO, the commissioner of the supervising department, or any duly authorized representative thereof. The Contractor and Subcontractors shall maintain all relevant records for a period of at least three years after final acceptance of the work.

The CPO is authorized to adopt, promulgate and enforce reasonable rules and regulations pertaining to the administration and enforcement of this section.

3.3.3. Wages

3.3.3.1. Minimum Wage, Mayoral Executive Order 2014-1

Mayoral Executive Order 2014-1 provides for a fair and adequate Minimum Wage to be paid to employees of City contractors and subcontractors performing work on City contracts. A copy of the Order may be downloaded from the Chicago City Clerk's website at: http://chicityclerk.com/wp-content/uploads/2014/09/Executive-Order-No.-2014-1.pdf

If this contract was advertised on or after October 1, 2014, Contractor must comply with Mayoral Executive Order 2014-1 and any applicable regulations issued by the CPO. As of October 1, 2014, the Minimum Wage to be paid pursuant to the Order is $13.00 per hour. The Minimum Wage must be paid to:

- All employees regularly performing work on City property or at a City jobsite.
- All employees whose regular work entails performing a service for the City under a City contract.

The Minimum Wage is not required to be paid to employees whose work is performed in general support of contractors operations, does not directly relate to the services provided to the City under the contract, and is included in the contract price as overhead, unless that employee's regularly assigned work location is on City property or at a City jobsite. It is also not required to be paid by employers that are 501(c)(3) not-for-profits.

Except as further described, the Minimum Wage is also not required to be paid to categories of employees subject to subsection 4(a)(2), subsection 4(a)(3), subsection 4(d), subsection 4(e), or Section 6 of the Illinois Minimum Wage Law, 820 ILCS 105/1 et seq., in force as of the date of this Contract or as amended. Nevertheless, the Minimum Wage is required to be paid to those workers described in subsections 4(a)(2)(A) and 4(a)(2)(B) of the Illinois Minimum Wage Law.

Additionally, the Minimum Wage is not required to be paid to employees subject to a collective bargaining agreement that provides for different wages than those required by Mayoral Executive Order 2014-1, if that collective bargaining agreement was in force prior to October 1, 2014 or if that collective bargaining agreement clearly and specifically waives the requirements of the order.

If the payment of a Base Wage pursuant to MCC Sect. 2-92-610 is required for work or services done under this Contract, and the Minimum Wage is higher than the Base Wage, then the Contractor must pay the Minimum Wage. Likewise, if the payment of a prevailing wage is required and the

prevailing wage is higher than the Minimum Wage, then the Contractor must pay the prevailing wage.

3.3.3.2. Living Wage Ordinance

MCC Sect. 2-92-610 provides for a living wage for certain categories of workers employed in the performance of City contracts, specifically non-City employed security guards, parking attendants, day laborers, home and health care workers, cashiers, elevator operators, custodial workers, and clerical workers ("Covered Employees"). Accordingly, pursuant to MCC Sect. 2-92-610 and regulations promulgated thereunder:

if the Contractor has 25 or more full-time employees, and if at any time during the performance of the contract the Contractor and/or any subcontractor or any other entity that provides any portion of the Services (collectively "Performing Parties") uses 25 or more full-time security guards, or any number of other full-time Covered Employees, then The Contractor's obligation to pay, and to assure payment of, the Base Wage will begin at any time during the Contract term when the conditions set forth in (1) and (2) above are met, and will continue thereafter until the end of the Contract term.

As of July 1, 2014 the Base Wage is $11.93. The current rate can be found on the Department of Procurement Services' website. Each July 1st the Base Wage will be adjusted, using the most recent federal poverty guidelines for a family of four (4) as published annually by the U.S. Department of Health and Human Services, to constitute the following: the poverty guidelines for a family of four (4) divided by 2000 hours or the current base wage, whichever is higher. At all times during the term of this Contract, Contractor and all other Performing Parties must pay the Base Wage (as adjusted in accordance with the above). If the payment of prevailing wages is required for work or services done under this Contract, and the prevailing wages for Covered Employees are higher than the Base Wage, then the Contractor must pay the prevailing wage rates.

The Contractor must include provisions in all subcontracts requiring its Subcontractors to pay the Base Wage to Covered Employees. The Contractor agrees to provide the City with documentation acceptable to the CPO demonstrating that all Covered Employees, whether employed by the Contractor or by a subcontractor, have been paid the Base Wage, upon the City's request for such documentation. The City may independently audit the Contractor and/or subcontractors to verify compliance herewith.

Failure to comply with the requirements of this Section will be an event of default under this Contract, and further, failure to comply may result in ineligibility for any award of a City contract or subcontract for up to three years.

Not-for-Profit Corporations: If the Contractor is a corporation having Federal tax-exempt status under Section 501(c)(3) of the Internal Revenue Code and is recognized under Illinois not-for-profit law, then the provisions above do not apply.

3.3.3.3. Equal Pay

The Contractor will comply with all applicable provisions of the Equal Pay Act of 1963, 29 U.S.C. 206(d) and the Illinois Equal Pay Act of 2003, 820 ILCS 112/1, *et seq*., as amended, and all applicable related rules and regulations including but not limited to those set forth in 29 CFR Part 1620 and 56 Ill. Adm. Code Part 320.

3.3.4. Economic Disclosure Statement and Affidavit and Appendix A ("EDS")

Pursuant to MCC Ch. 2-154 and 65 ILCS 5/8-10-8.5 any person, business entity or agency submitting a bid or proposal to or contracting with the City of Chicago will be required to complete the Disclosure of Ownership Interests in the EDS. Failure to provide complete or accurate disclosure will render this Contract voidable by the City.

Contractors must complete an online EDS prior to the Bid Opening Date. Contractors are responsible for notifying the City and updating their EDS any time there is a change in circumstances that makes any

information provided or certification made in an EDS inaccurate, obsolete or misleading. Failure to so notify the City and update the EDS is grounds for declaring the Contractor in default, terminating the Contract for default, and declaring the Contractor ineligible for future contracts.

Contractor makes certain representations and certifications that the City relies on in its decision to enter into a contract. The Laws and requirements that are addressed in the EDS include the following:

3.3.4.1. Business Relationships With Elected Officials MCC Sect. 2-156-030(b)
Pursuant to MCC Sect. 2-156-030(b), it is illegal for any elected official, or any person acting at the direction of such official, to contact either orally or in writing any other City official or employee with respect to any matter involving any person with whom the elected official has any business relationship that creates a financial interest on the part of the official, or the domestic partner or spouse of the official, or from whom or which he has derived any income or compensation during the preceding twelve months or from whom or which he reasonably expects to derive any income or compensation in the following twelve months. In addition, no elected official may participate in any discussion in any City Council committee hearing or in any City Council meeting or vote on any matter involving the person with whom the elected official has any business relationship that creates a financial interest on the part of the official, or the domestic partner or spouse of the official, or from whom or which he has derived any income or compensation during the preceding twelve months or from whom or which he reasonably expects to derive any income or compensation in the following twelve months.

Violation of MCC Sect. 2-156-030 by any elected official with respect to this contract will be grounds for termination of this contract. The term financial interest is defined as set forth in MCC Chapter 2-156.

3.3.4.2. MCC 1-23 and 720 ILCS 5/33E Bribery, Debts, and Debarment Certification
The Contractor or each joint venture partner, if applicable, must complete the appropriate subsections in the EDS which certify that the Contractor or each joint venture partner, its agents, employees, officers and any subcontractors (a) have not been engaged in or been convicted of bribery or attempted bribery of a public officer or employee of the City of Chicago, the State of Illinois, any agency of the federal government or any state or local government in the United States or engaged in or been convicted of bid-rigging or bid-rotation activities as defined in this section as required by the Illinois Criminal Code; (b) do not owe any debts to the State of Illinois, in accordance with 65 ILCS 5/11-42.1-1 and (c) are not presently debarred or suspended; Certification Regarding Environmental Compliance; Certification Regarding Ethics and Inspector General; and Certification Regarding Court-Ordered Child Support Compliance.

Contractor, in performing under this contract shall comply with MCC Sect. 2-92-320, as follows:

No person or business entity shall be awarded a contract or sub-contract if that person or business entity: (a) has been convicted of bribery or attempting to bribe a public officer or employee of the City of Chicago, the State of Illinois, or any agency of the federal government or of any state or local government in the United States, in that officers or employee's official capacity; or (b) has been convicted of agreement or collusion among bidders or prospective bidders in restraint of freedom of competition by agreement to bid a fixed price, or otherwise; or (c) has made an admission of guilt of such conduct described in (a) or (b) above which is a matter of record but has not been prosecuted for such conduct.

For purposes of this section, where an official, agent or employee of a business entity has committed any offense under this section on behalf of such an entity and pursuant to the direction or authorization of a responsible official thereof, the business entity will be chargeable with the conduct.

One business entity will be chargeable with the conduct of an affiliated agency. Ineligibility under this section will continue for three (3) years following such conviction or admission. The period of ineligibility may be reduced, suspended, or waived by the CPO under certain specific circumstances.

Reference is made to Section 2-92-320 for a definition of affiliated agency, and a detailed description of the conditions which would permit the CPO to reduce, suspend, or waive the period of ineligibility.

3.3.4.3. Federal Terrorist (No-Business) List

Contractor warrants and represents that neither Contractor nor an Affiliate, as defined below, appears on the Specially Designated Nationals List, the Denied Persons List, the Unverified List, the Entity List, or the Debarred List as maintained by the Office of Foreign Assets Control of the U.S. Department of the Treasury or by the Bureau of Industry and Security of the U.S. Department of Commerce or their successors, or on any other list of persons or entities with which the City may not do business under any applicable law, rule, regulation, order or judgment.

"Affiliate" means a person or entity which directly, or indirectly through one or more intermediaries, controls, is controlled by or is under common control with Contractor. A person or entity will be deemed to be controlled by another person or entity if it is controlled in any manner whatsoever that results in control in fact by that other person or entity, either acting individually or acting jointly or in concert with others, whether directly or indirectly and whether through share ownership, a trust, a contract or otherwise.

3.3.4.4. Governmental Ethics Ordinance 2-156

Contractor must comply with MCC Ch. 2-156, Governmental Ethics, including but not limited to MCC Sect. 2-156-120 pursuant to which no payment, gratuity or offer of employment will be made in connection with any City contract, by or on behalf of a subcontractor to the prime Contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order. Any contract negotiated, entered into, or performed in violation of any of the provisions of this Chapter will be voidable as to the City.

3.3.4.5. Lobbyists

Contractor must comply with Chapter 2-156 of the Municipal Code. Contractor acknowledges that any Agreement entered into, negotiated or performed in violation of any of the provisions of Chapter 2-156, including any contract entered into with any person who has retained or employed a non-registered lobbyist in violation of Section 2-156-305 of the Municipal Code is voidable as to the City.

3.3.5. Restrictions on Business Dealings

3.3.5.1. Conflicts of Interest

The Contractor covenants that it presently has no interest and will not acquire any interest, direct or indirect, in any enterprise which would conflict in any manner or degree with the performance of the work, services or goods to be provided hereunder. The Contractor further covenants that in its performance of the Contract no person having any such interest shall be employed. If the City determines that the Contractor does have such a conflict of interest, the City will notify the Contractor in writing, stating the basis for its determination. The Contractor will thereafter have 30 days in which to respond with reasons why the Contractor believes a conflict of interest does not exist. If the Contractor does not respond or if the City still reasonably determines a conflict of interest to exist, the Contractor must terminate its interest in the other enterprise.

3.3.5.2. Prohibition on Certain Contributions, Mayoral Executive Order 2011-4

No Contractor or any person or entity who directly or indirectly has an ownership or beneficial interest in Contractor of more than 7.5% ("Owners"), spouses and domestic partners of such Owners, Contractor's Subcontractors, any person or entity who directly or indirectly has an ownership or beneficial interest in any Subcontractor of more than 7.5% ("Sub-owners") and spouses and domestic partners of such Sub-owners (Contractor and all the other preceding classes of persons and entities are together, the "Identified Parties"), shall make a contribution of any amount to the Mayor of the City of Chicago (the "Mayor") or to his political fundraising committee during (i) the bid or other solicitation process for this Contract or Other Contract, including while this Contract or Other Contract is executory, (ii) the term of this Contract or any Other Contract

between City and Contractor, and/or (iii) any period in which an extension of this Contract or Other Contract with the City is being sought or negotiated.

Contractor represents and warrants that since the date of public advertisement of the specification, request for qualifications, request for proposals or request for information (or any combination of those requests) or, if not competitively procured, from the date the City approached the Contractor or the date the Contractor approached the City, as applicable, regarding the formulation of this Contract, no Identified Parties have made a contribution of any amount to the Mayor or to his political fundraising committee.

Contractor shall not: (a) coerce, compel or intimidate its employees to make a contribution of any amount to the Mayor or to the Mayor's political fundraising committee; (b) reimburse its employees for a contribution of any amount made to the Mayor or to the Mayor's political fundraising committee; or (c) bundle or solicit others to bundle contributions to the Mayor or to his political fundraising committee.

The Identified Parties must not engage in any conduct whatsoever designed to intentionally violate this provision or Mayoral Executive Order No. 2011-4 or to entice, direct or solicit others to intentionally violate this provision or Mayoral Executive Order No. 2011-4.

Violation of, non-compliance with, misrepresentation with respect to, or breach of any covenant or warranty under this provision or violation of Mayoral Executive Order No. 2011-4 constitutes a breach and default under this Contract, and under any Other Contract for which no opportunity to cure will be granted. Such breach and default entitles the City to all remedies (including without limitation termination for default) under this Contract, under Other Contract, at law and in equity. This provision amends any Other Contract and supersedes any inconsistent provision contained therein.

If Contractor violates this provision or Mayoral Executive Order No. 2011-4 prior to award of the Contract resulting from this specification, the CPO may reject Contractor's bid.

For purposes of this provision:

"**Other Contract**" means any agreement entered into between the Contractor and the City that is (i) formed under the authority of MCC Ch. 2-92; (ii) for the purchase, sale or lease of real or personal property; or (iii) for materials, supplies, equipment or services which are approved and/or authorized by the City Council.

"**Contribution**" means a "political contribution" as defined in MCC Ch. 2-156, as amended.

"**Political fundraising committee**" means a "political fundraising committee" as defined in MCC Ch. 2-156, as amended.

3.3.6. Debts Owed to the City; Anti-Scofflaw, MCC Sect. 2-92-380

In addition to the certifications regarding debts owed to the City in the EDS, Contractor is subject to MCC Sect. 2-92-380.

Pursuant to MCC Sect. 2-92-380 and in addition to any other rights and remedies (including set-off) available to the City under this Contract or permitted at law or in equity, the City will be entitled to set off a portion of the contract price or compensation due under the Contract, in an amount equal to the amount of the fines and penalties for each outstanding parking violation complaint and the amount of any debt owed by the contracting party to the City. For purposes of this section, outstanding parking violation complaint means a parking ticket, notice of parking violation, or parking violation complaint on which no payment has been made or appearance filed in the Circuit Court of Cook County within the time specified on the complaint, and debt means a specified sum of money owed to the City for which the period granted for payment has expired.

However no such debt(s) or outstanding parking violation complaint(s)will be offset from the contract price or compensation due under the contract if one or more of the following conditions are met:

the contracting party has entered into an agreement with the Department of Revenue, or other appropriate City department, for the payment of all outstanding parking violation complaints and debts owed to the City and the Contracting party is in compliance with the agreement; or

the contracting party is contesting liability for or the amount of the debt in a pending administrative or judicial proceeding; or the contracting party has filed a petition in bankruptcy and the debts owed the City are dischargeable in bankruptcy.

3.3.7. Other City Ordinances and Policies

3.3.7.1. False Statements

False statements made in connection with this Contract, including statements in, omissions from and failures to timely update the EDS, as well as in any other affidavits, statements or Contract Documents constitute a material breach of the Contract. Any such misrepresentation renders the Contract voidable at the option of the City, notwithstanding any prior review or acceptance by the City of any materials containing such a misrepresentation. In addition, the City may debar Contractor, assert any contract claims or seek other civil or criminal remedies as a result of a misrepresentation (including costs of replacing a terminated Contractor pursuant to MCC Sect. 1-21-010.

3.3.7.2. MacBride Principles Ordinance, MCC Sect. 2-92-580

This law promotes fair and equal employment opportunities and labor practices for religious minorities in Northern Ireland and provide a better working environment for all citizens in Northern Ireland.

In accordance with MCC Sect. 2-92-580, if the primary Contractor conducts any business operations in Northern Ireland, it is hereby required that the Contractor will make all reasonable and good faith efforts to conduct any business operations in Northern Ireland in accordance with the MacBride Principles for Northern Ireland as defined in Illinois Public Act 85-1390 (1988 III. Laws 3220).

For those bidders who take exception in competitive bid contracts to the provision set forth above, the City will assess an eight percent (8%) penalty. This penalty will increase their bid price for the purpose of canvassing the bids in order to determine who is to be the lowest responsible bidder. This penalty will apply only for purposes of comparing bid amounts and will not affect the amount of any contract payment.

The provisions of this Section will not apply to contracts for which the City receives funds administered by the United States Department of Transportation (USDOT) except to the extent Congress has directed that USDOT not withhold funds from states and localities that choose to implement selective purchasing policies based on agreement to comply with the MacBride Principles for Northern Ireland, or to the extent that such funds are not otherwise withheld by the DOT.

3.3.7.3. 2014 Hiring Plan Prohibitions

A. The City is subject to the June 16, 2014 "City of Chicago Hiring Plan" (the "2014 City Hiring Plan") entered in *Shakman v. Democratic Organization of Cook County*, Case No 69 C 2145 (United States District Court for the Northern District of Illinois). Among other things, the 2011 City Hiring Plan prohibits the City from hiring persons as governmental employees in non-exempt positions on the basis of political reasons or factors.

B. Contractor is aware that City policy prohibits City employees from directing any individual to apply for a position with Contractor, either as an employee or as a subcontractor, and from directing Contractor to hire an individual as an employee or as a Subcontractor. Accordingly, Contractor must follow its own hiring and contracting procedures, without being influenced by City employees. Any and all personnel provided by Contractor under this Contract are employees or Subcontractors of Contractor, not employees of the City of Chicago. This Contract is not intended to and does not constitute, create, give rise to, or

otherwise recognize an employer-employee relationship of any kind between the City and any personnel provided by Contractor.

C. Contractor will not condition, base, or knowingly prejudice or affect any term or aspect of the employment of any personnel provided under this Contract, or offer employment to any individual to provide services under this Contract, based upon or because of any political reason or factor, including, without limitation, any individual's political affiliation, membership in a political organization or party, political support or activity, political financial contributions, promises of such political support, activity or financial contributions, or such individual's political sponsorship or recommendation. For purposes of this Contract, a political organization or party is an identifiable group or entity that has as its primary purpose the support of or opposition to candidates for elected public office. Individual political activities are the activities of individual persons in support of or in opposition to political organizations or parties or candidates for elected public office.

D. In the event of any communication to Contractor by a City employee or City official in violation of paragraph B above, or advocating a violation of paragraph C above, Contractor will, as soon as is reasonably practicable, report such communication to the Hiring Oversight Section of the City's Office of the Inspector General, and also to the head of the relevant City Department utilizing services provided under this Contract. Contractor will also cooperate with any inquiries by OIG Hiring Oversight.

3.3.7.4. Inspector General and Legislative Inspector General

It is the duty of any bidder, proposer or Contractor, all Subcontractors, every applicant for certification of eligibility for a City contract or program, and all officers, directors, agents, partners and employees of any bidder, proposer, Contractor, Subcontractor or such applicant to cooperate with the Inspector General or the Legislative Inspector General in any investigation or hearing, if applicable, undertaken pursuant to MCC Ch. 2-56 or 2-55, respectively. Contractor understands and will abide by all provisions of MCC Ch. 2-56 and 2-55.

All subcontracts must inform Subcontractors of this provision and require understanding and compliance with them.

3.3.7.5. Duty to Report Corrupt Activity

Pursuant to MCC 2-156-018, it is the duty of the Contractor to report to the Inspector General, directly and without undue delay, any and all information concerning conduct which it knows to involve corrupt activity. "Corrupt activity" means any conduct set forth in Subparagraph (a)(1), (2) or (3) of Section 1-23-020 of the MCC. Knowing failure to make such a report will be an event of default under this Contract. Reports may be made to the Inspector General's toll free hotline, 866-IG-TIPLINE (866-448-4754).

3.3.7.6. Electronic Mail Communication

Electronic mail communication between Contractor and City employees must relate only to business matters between Contractor and the City.

3.3.7.7. EDS Update Obligation

Contractor is required to notify the City and update the EDS whenever there is a change in circumstances that makes any certification or information provided in an EDS inaccurate, obsolete or misleading. Failure to notify the City and update the EDS is grounds for declaring the Contractor in default, termination of the Contract for default, and declaring that the Contractor is ineligible for future contracts.

3.3.8. Compliance with Environmental Laws and Related Matters

3.3.8.1. Definitions

For purposes of this section, the following definitions shall apply:

Environmental Agency: An Environmental Agency is any governmental agency having responsibility, in whole or in part, for any matter addressed by any Environmental Law. An agency need not be responsible only for matters addressed by Environmental Law(s) to be an Environmental Agency for purposes of this Contract.

Environmental Claim: An Environmental Claim is any type of assertion that Contractor or any Subcontractor is liable, or allegedly is liable, or should be held liable, under any Environmental Law, or that Contractor or any Subcontractor has or allegedly has violated or otherwise failed to comply with any Environmental Law. A non-exhaustive list of Environmental Claims includes, without limitation: demand letters, lawsuits and citations of any kind regardless of originating source.

Environmental Law: An Environmental Law is any Law that in any way, directly or indirectly, in whole or in part, bears on or relates to the environment or to human health or safety. A non-exhaustive list of Environmental Laws includes without limitation the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601, et seq., the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq., the Hazardous Materials Transportation Act, 49 U.S.C. 5101, et seq., the Clean Air Act, 42 U.S.C. 7401, et seq., the Federal Water Pollution Control Act, 33 U.S.C. 1251, et seq., the Occupational Safety and Health Act, 29 U.S.C. 651, et seq., the Illinois Environmental Protection Act, 415 ILCS 5/1, et seq., the Illinois Health and Safety Act, 820 ILCS 225/.01, et seq., Chapters 7-28 and 11-4 of the Chicago Municipal Code, and all related rules and regulations.

Law(s): The word "Law" or "Laws," whether or not capitalized, is intended in the broadest possible sense, including without limitation all federal, state and local: statutes; ordinances; codes; rules; regulations; administrative and judicial orders of any kind; requirements and prohibitions of permits, licenses or other similar authorizations of any kind; court decisions; common law; and all other legal requirements and prohibitions.

Routine: As applied to reports or notices, "routine" refers to a report or notice that must be made, submitted or filed on a regular, periodic basis (e.g., quarterly, annually, biennially) and that in no way arises from a spill or other release or any kind, or from an emergency response situation, or from any actual, possible or alleged noncompliance with any Environmental Law.

3.3.8.2. Joint Ventures
If Contractor or any Subcontractor is a joint venture, then every party to every such joint venture is deemed a Subcontractor for purposes of this section, which is entitled "Compliance with Environmental Laws and Related Matters" and every subsection thereof.

3.3.8.3. Compliance With Environmental Laws
Any noncompliance, by Contractor or any Subcontractor, with any Environmental Law during the time that this Contract is effective is an event of default, regardless of whether the noncompliance relates to performance of this Contract. This includes without limitation any failure by Contractor or any Subcontractor to keep current, throughout the term of this Contract, all insurance certificates, permits and other authorizations of any kind that are required, directly or indirectly, by any Environmental Law.

3.3.8.4. Costs
Any cost arising directly or indirectly, in whole or in part, from any noncompliance, by Contractor or any Subcontractor, with any Environmental Law, will be borne by the Contractor and not by the City. No provision of this Contract is intended to create or constitute an exception to this provision.

3.3.8.5. Proof of Noncompliance; Authority; Cure
Any adjudication, whether administrative or judicial, against Contractor or any Subcontractor, for a violation of any Environmental Law, is sufficient proof of noncompliance, and therefore of an event of default, for purposes of this Contract.

Any citation issued to/against Contractor or any Subcontractor, by any government agent or entity, alleging a violation of any Environmental Law, is sufficient proof of noncompliance for purposes of this Contract, and therefore of an event of default, if the citation contains or is accompanied by, or the City otherwise obtains, any evidence sufficient to support a reasonable conclusion that a violation has occurred.

Any other evidence of noncompliance with any Environmental Law is sufficient proof of noncompliance for purposes of this Contract, and therefore of an event of default, if the evidence is sufficient to support a reasonable conclusion that noncompliance has occurred.

The CPO shall have the authority to determine whether noncompliance with an Environmental Law has occurred, based on any of the foregoing types of proof. Upon determining that noncompliance has occurred, s/he may in his/her discretion declare an event of default and may in his/her discretion offer Contractor an opportunity to cure the event of default, such as by taking specified actions, which may include without limitation ceasing and desisting from utilizing a Subcontractor.

The CPO may consider many factors in determining whether to declare an event of default, whether to offer an opportunity to cure, and if so any requirements for cure, including without limitation: the seriousness of the noncompliance, any effects of the noncompliance, Contractor's and/or Subcontractor's history of compliance or noncompliance with the same or other Laws, Contractor's and/or Subcontractor's actions or inaction towards mitigating the noncompliance and its effects, and Contractor's or Subcontractor's actions or inaction towards preventing future noncompliance.

3.3.8.6. Copies of Notices and Reports; Related Matters
If any Environmental Law requires Contractor or any Subcontractor to make, submit or file any non-Routine notice or report of any kind, to any Environmental Agency or other person, including without limitation any agency or other person having any responsibility for any type of emergency response activity, then Contractor must deliver a complete copy of the notice or report (or, in the case of legally required telephonic or other oral notices or reports, a comprehensive written summary of same) to the Law Department within 48 hours of making, submitting or filing the original report.

The requirements of this provision apply, regardless of whether the subject matter of the required notice or report concerns performance of this Contract.

Failure to comply with any requirement of this provision is an event of default.

3.3.8.7. Requests for Documents and Information
If the Commissioner requests documents or information of any kind that directly or indirectly relate(s) to performance of this Contract, Contractor must obtain and provide the requested documents and/or information to the Commissioner within 5 business days.

Failure to comply with any requirement of this provision is an event of default.

3.3.8.8. Environmental Claims and Related Matters
Within 24 hours of receiving notice of any Environmental Claim, Contractor must submit copies of all documents constituting or relating to the Environmental Claim to the Law Department . Thereafter, Contractor must submit copies of related documents if requested by the Law Department. These requirements apply, regardless of whether the Environmental Claim concerns performance of this Contract.

Failure to comply with any requirement of this provision is an event of default.

3.3.8.9. Preference for Recycled Materials
To the extent practicable and economically feasible and to the extent that it does not reduce or impair the quality of any work or services, Contractor must use recycled products in performance of the Contract pursuant to U.S. Environment Protection Agency (U.S. EPA) guidelines at 40 CFR Parts

247-253, which implement section 6002 of the Resource Conservation and Recovery Act, as amended, 42 USC § 6962.

3.3.8.10. No Waste Disposal in Public Way MCC 11-4-1600(E)

Contractor warrants and represents that it, and to the best of its knowledge, its Subcontractors have not violated and are not in violation of the following sections of the Code (collectively, the Waste Sections):

7-28-390 Dumping on public way;
7-28-440 Dumping on real estate without permit;
11-4-1410 Disposal in waters prohibited;
11-4-1420 Ballast tank, bilge tank or other discharge;
11-4-1450 Gas manufacturing residue;
11-4-1500 Treatment and disposal of solid or liquid waste;
11-4-1530 Compliance with rules and regulations required;
11-4-1550 Operational requirements; and
11-4-1560 Screening requirements.

During the period while this Contract is executory, Contractor's or any Subcontractor's violation of the Waste Sections, whether or not relating to the performance of this Contract, constitutes a breach of and an event of default under this Contract, for which the opportunity to cure, if curable, will be granted only at the sole discretion of the CPO. Such breach and default entitles the City to all remedies under the Contract, at law or in equity.

This section does not limit the Contractor's and its Subcontractors' duty to comply with all applicable federal, state, county and municipal laws, statutes, ordinances and executive orders, in effect now or later, and whether or not they appear in this Contract.

Non-compliance with these terms and conditions may be used by the City as grounds for the termination of this Contract, and may further affect the Contractor's eligibility for future contract awards.

3.4. Contract Disputes

3.4.1. Procedure for Bringing Disputes to the Department

The Contractor and using Department must attempt to resolve all disputes arising under this Contract in good faith, taking such measures as, but not limited to investigating the facts of the dispute and meeting to discuss the issue(s).

In order to bring a dispute to the Commissioner of a Department, Contractor must provide a general statement of the basis for its claim, the facts underlying the claim, reference to the applicable Contract provisions, and all documentation that describes, relates to and supports the claim. By submitting a Claim, the Contractor certifies that:

A. The Claim is made in good faith;

B. The Claim's supporting data are accurate and complete to the best of the person's knowledge and belief;

C. The amount of the Claim accurately reflects the amount that the claimant believes is due from the City; and

D. The certifying person is duly authorized by the claimant to certify the Claim.

The Commissioner shall have 30 days from receipt of the Claim to render a written "final decision of the Commissioner" stating the Commissioner's factual and contractual basis for the decision. However, the Commissioner may take an additional period, not to exceed 10 days, to render the final decision. If the Commissioner does not render a "final decision of the Commissioner" within the prescribed time frame, then the Claim should be deemed denied by the Commissioner.

3.4.2. Procedure for Bringing Disputes before the CPO

Only after the Commissioner has rendered a final decision denying the Contractor's claim may a dispute be brought before the CPO.

If the Contractor and using Department are unable to resolve the dispute, prior to seeking any judicial action, the Contractor must and the using Department may submit the dispute the CPO for an administrative decision based upon the written submissions of the parties. The party submitting the dispute to the CPO must include documentation demonstrating its good faith efforts to resolve the dispute and either the other party's failure to exercise good faith efforts or both parties' inability to resolve the dispute despite good faith efforts.

The decision of the CPO is final and binding. The sole and exclusive remedy to challenge the decision of the CPO is judicial review by means of a common law writ of certiorari.

The administrative process is described more fully in the "Regulations of the Department of Procurement Services for Resolution of Disputes between Contractors and the City of Chicago", which are available in City Hall, 121 N. LaSalle Street, Room 301, Bid and Bond Room, and on-line at:

http://www.cityofchicago.org/content/dam/city/depts/dps/RulesRegulations/Dispute_Regulations_2002.pdf

3.5. Events of Default and Termination

3.5.1. Events of Default

In addition to any breach of contract and events of default described within the Contract Documents, the following constitute an event of default:

A. Any material misrepresentation, whether negligent or willful and whether in the inducement or in the performance, made by Contractor to the City.

B. Contractor's material failure to perform any of its obligations under this Contract including the following:

C. Failure to perform the Services with sufficient personnel and equipment or with sufficient material to ensure the timely performance of the Services

D. Failure to have and maintain all professional licenses required by law to perform the Services;

E. Failure to timely perform the Services;

F. Failure to perform the Services in a manner reasonably satisfactory to the Commissioner or the CPO or inability to perform the Services satisfactorily as a result of insolvency, filing for bankruptcy or assignment for the benefit of creditors;

G. Failure to promptly re-perform, as required, within a reasonable time and at no cost to the City, Services that are rejected as erroneous or unsatisfactory;

H. Discontinuance of the Services for reasons within Contractor's reasonable control;

I. Failure to update promptly EDS(s) furnished in connection with this Contract when the information or responses contained in it or them is no longer complete or accurate;

J. Failure to comply with any other term of this Contract, including the provisions concerning insurance and nondiscrimination; and

K. Any change in ownership or control of Contractor without the prior written approval of the CPO, which approval the CPO will not unreasonably withhold.

L. Contractor's default under any other Contract it may presently have or may enter into with the City during the life of this Contract. Contractor acknowledges and agrees that in the event of a default under this Contract the City may also declare a default under any such other agreements.

M. Contractor's repeated or continued violations of City ordinances unrelated to performance under the Contract that in the opinion of the CPO indicate a willful or reckless disregard for City laws and regulations.

N. Contractor's use of a subcontractor that is currently debarred by the City or otherwise ineligible to do business with the City.

3.5.2. Cure or Default Notice

The occurrence of any event of default permits the City, at the City(s sole option, to declare Contractor in default.

The CPO will give Contractor written notice of the default, either in the form of a cure notice ("Cure Notice"), or, if no opportunity to cure will be granted, a default notice ("Default Notice").

If a Cure Notice is sent, the CPO may in his/her sole discretion will give Contractor an opportunity to cure the default within a specified period of time, which will typically not exceed 30 days unless extended by the CPO. The period of time allowed by the CPO to cure will depend on the nature of the event of default and the Contractor's ability to cure. In some circumstances the event of default may be of such a nature that it cannot be cured. Failure to cure within the specified time may result in a Default Notice to the Contractor.

Whether to issue the Contractor a Default Notice is within the sole discretion of the CPO and neither that decision nor the factual basis for it is subject to review or challenge under the Disputes provision of this Contract

If the CPO issues a Default Notice, the CPO will also indicate any present intent the CPO may have to terminate this Contract. The decision to terminate is final and effective upon giving the notice. If the CPO decides not to terminate, this decision will not preclude the CPO from later deciding to terminate the Contract in a later notice, which will be final and effective upon the giving of the notice or on such later date set forth in the Default Notice.

When a Default Notice with intent to terminate is given, Contractor must discontinue any Services, unless otherwise directed in the notice.

3.5.3. Remedies

After giving a Default Notice, the City may invoke any or all of the following remedies:

A. The right to take over and complete the Services, or any part of them, at Contractor(s expense and as agent for Contractor, either directly or through others, and bill Contractor for the cost of the Services, and Contractor must pay the difference between the total amount of this bill and the amount the City would have paid Contractor under the terms and conditions of this Contract for the Services that were assumed by the City as agent for Contractor

B. The right to terminate this Contract as to any or all of the Services yet to be performed effective at a time specified by the City;

C. The right to seek specific performance, an injunction or any other appropriate equitable remedy;

D. The right to seek money damages;

E. The right to withhold all or any part of Contractor's compensation under this Contract;

F. The right to deem Contractor non-responsible in future contracts to be awarded by the City.

3.5.4. Non-Exclusivity of Remedies

The remedies under the terms of this Contract are not intended to be exclusive of any other remedies provided, but each and every such remedy is cumulative and is in addition to any other remedies, existing now or later, at law, in equity or by statute. No delay or omission to exercise any right or power accruing upon any event of default impairs any such right or power, nor is it a waiver of any event of

default nor acquiescence in it, and every such right and power may be exercised from time to time and as often as the City considers expedient.

3.5.5. City Reservation of Rights
If the CPO considers it to be in the City(s best interests, the CPO may elect not to declare default or to terminate this Contract. The parties acknowledge that this provision is solely for the benefit of the City and that if the City permits Contractor to continue to provide the Services despite one or more events of default, Contractor is in no way relieved of any of its responsibilities, duties or obligations under this Contract, nor does the City waive or relinquish any of its rights.

3.5.6. Early Termination
The City may terminate this Contract, in whole or in part, at any time by a notice in writing from the City to the Contractor. The effective date of termination will be the date the notice is received by the Contractor or the date stated in the notice, whichever is later.

After the notice is received, the Contractor must restrict its activities, and those of its Subcontractors, to activities pursuant to direction from the City. No costs incurred after the effective date of the termination are allowed unless the termination is partial.

Contractor is not entitled to any anticipated profits on services, work, or goods that have not been provided. The payment so made to the Contractor is in full settlement for all services, work or goods satisfactorily provided under this Contract. If the Contractor disputes the amount of compensation determined by the City to be due Contractor, then the Contractor must initiate dispute settlement procedures in accordance with the Disputes provision.

If the City's election to terminate this Contract for default pursuant to the default provisions of the Contract is determined in a court of competent jurisdiction to have been wrongful, then in that case the termination is to be deemed to be an early termination pursuant to this Early Termination provision.

3.6. Department-specific Requirements
Contractor must comply with the relevant user Department's specific requirements in the performance of this Contract if applicable.

3.6.1. Department of Aviation Standard Requirements
For purposes of this section "Airport" refers to either Midway International Airport or O'Hare International Airport, which are both owned and operated by the City of Chicago.

3.6.1.1. Confidentiality of Airport Security Data
Contractor has an ongoing duty to protect confidential information, including but not limited to any information exempt from disclosure under the Illinois Freedom of Information Act such as information affecting security of the airport ("Airport Security Data"). Airport Security Data includes any Sensitive Security Information as defined by 49 CFR Part 1520. Contractor acknowledges that information provided to, generated by, or encountered by Contractor may include Airport Security Data. If Contractor fails to safeguard the confidentiality of Airport Security Data, Contractor is liable for the reasonable costs of actions taken by the City, the airlines, the Federal Aviation Administration ("FAA"), or the Transportation Security Administration ("TSA") that the applicable entity, in its sole discretion, determines to be necessary as a result, including without limitation the design and construction of improvements, procurement and installation of security devices, and posting of guards. All Subcontracts or purchase orders entered into by the Contractor, with parties providing material, labor or services to complete the Work, must contain the language of this section. If the Contractor fails to incorporate the required language in all Subcontracts or purchase orders, the provisions of this section are deemed incorporated in all Subcontracts or purchase orders.

3.6.1.2. Aviation Security
This Contract is subject to the airport security requirements of 49 United States Code, Chapter 449, as amended, the provisions of which govern airport security and are incorporated by reference,

including without limitation the rules and regulations in 14 CFR Part 107 and all other applicable rules and regulations promulgated under them. All employees providing services at the City's airports must be badged by the City. (See Airport Security Badges.) Contractor, Subcontractors and the respective employees of each are subject to such employment investigations, including criminal history record checks, as the Administrator of the Federal Aviation Administration ("FAA"), the Under Secretary of the Transportation Security Administration ("TSA"), and the City may deem necessary. Contractor, Subcontractors, their respective employees, invitees and all other persons under the control of Contractor must comply strictly and faithfully with any and all rules, regulations and directions which the Commissioner, the FAA, or the TSA may issue from time to time may issue during the life of this Contract with regard to security, safety, maintenance and operation of the Airport and must promptly report any information regarding suspected violations in accordance with those rules and regulations.

Gates and doors that permit entry into restricted areas at the Airport must be kept locked by Contractor at all times when not in use or under Contractor's constant security surveillance. Gate or door malfunctions must be reported to the Commissioner without delay and must be kept under constant surveillance by Contractor until the malfunction is remedied.

3.6.1.3. Airport Security Badges

As part of airport operations and security, the Contractor must obtain from the airport badging office Airport Security Badges for each of his employees, subcontractors, material men, invitees or any person(s) over whom Contractor has control, which must be visibly displayed at all times while at the airport. No person will be allowed beyond security checkpoints without a valid Airport Security Badge. Each such person must submit signed and properly completed application forms to receive Airport Security Badges. Additional forms and tests may be required to obtain Airport Drivers Certification and Vehicle Permits. The application forms will solicit such information as the Commissioner may require in his discretion, including but not limited to name, address, date of birth (and for vehicles, driver's license and appropriate stickers). The Contractor is responsible for requesting and completing the form for each employee and subcontractor employee who will be working at the Airport and all vehicles to be used on the job site. Upon signed approval of the application by the Commissioner or his designee, the employee will be required to attend a presentation regarding airport security and have his or her photo taken for the badge. The Commissioner may grant or deny the application in his sole discretion. The Contractor must make available to the Commissioner, within one day of request, the personnel file of any employee who will be working on the project.

As provided in Aviation Security above, in order for a person to have an Airport Security Badge that allows access to the airfield or aircraft, a criminal history record check (CHRC) conducted by the Department of Aviation will also be required. The CHRC will typically include a fingerprint analysis by the Federal Bureau of Investigation and such other procedures as may be required by the TSA.

Airport Security Badges, Vehicle Permits and Drivers Licenses will only be issued based upon properly completed application forms. Employees or vehicles without proper credentials may be removed from the secured area and may be subject to fine or arrest. Contractor will be jointly and severally liable for any fines imposed on its employees or its Subcontractors employees.

In addition to other rules and regulations, the following rules related to Airport Security Badges, Vehicle Permits and Drivers Licenses must be adhered to:

A. Each person must wear and display his or her Airport Security Badge on their outer apparel at all times while at the airport.

B. All individuals operating a vehicle on the Aircraft Operations Area (AOA) must be familiar and comply with motor driving regulations and procedures of the State of Illinois, City of Chicago and the Department of Aviation. The operator must be in possession of a valid, State-issued Motor Vehicle Operators Driver's License. All individuals operating a vehicle

on the AOA without an escort must also be in possession of a valid Aviation-issued Airport Drivers Permit.

C. All operating equipment must have an Airport Vehicle Access Permit affixed to the vehicle at all times while operating on the Airport. All required City stickers and State Vehicle Inspection stickers must be valid.

D. Individuals must remain within their assigned area and haul routes unless otherwise instructed by the Department of Aviation.

E. The Contractors personnel who function as supervisors, and those that escort the Contractors equipment/operators to their designated work sites, may be required to obtain an added multi-area access designation on their personnel Airport Security Badge which must also be displayed while on the AOA.

3.6.1.4. General Requirements Regarding Airport Operations

3.6.1.4.1. Priority of Airport Operations

Where the performance of the Contract may affect airport operation, the Contractor must cooperate fully with the Commissioner and his representatives in all matters pertaining to public safety and airport operation. Whether or not measures are specifically required by this Contract, the Contractor at all times must maintain adequate protection to safeguard aircraft, the public and all persons engaged in the work and must take such precaution as will accomplish such end, without interference with aircraft, the public, or maintenance and operations of the airport.

The Contractor's attention is drawn to the fact that airport facilities and infrastructure, including but not limited to runways, taxiways, vehicular roadways, loadways, loading aprons, concourses, holdrooms, gates, and passenger right-of-ways, are being used for scheduled and unscheduled civilian air transportation. Arrivals and departures are under the control of the FAA control tower(s). Use of the Airport for air transportation takes precedence over all of the Contractor's operations. No extra compensation will be allowed for any delays brought about by the operations of the Airport which require that Contractor's work must be interrupted or moved from one part of the work site to another.

3.6.1.4.2. Interruption of Airport Operations

If Contractor requires interruption of Airport facilities or utilities in order to perform work, Contractor must notify the Deputy Commissioner in charge of the project at least five (5) working days in advance of such time and must obtain the Deputy Commissioner's approval prior to interrupting the service. Interruption of service must be kept to an absolute minimum, and to the extent practicable the work which occasions such interruptions must be performed in stages in order to reduce the time of each interruption. In case of interruptions of electrical services, service must be restored prior to sunset of the same day.

Prior to start of work, the Contractor must request of the Deputy Commissioner in charge of the project to provide specific requirements and instructions which are applicable to the particular work site areas, including, but not limited to, areas available for storage of any equipment, materials, tools and supplies needed to perform the work. Contractors must advise the Deputy Commissioner in charge of the project of the volume of equipment, materials, tools, and supplies that will be required in the secured areas of the airport in order to make arrangements for inspection of such equipment, materials, tools, and supplies at a security checkpoint.

3.6.1.4.3. Safeguarding of Airport Property and Operations

The Contractor must not permit or allow its employees, subcontractors, material men, invitees or any other persons over whom Contractor has control to enter or remain upon, or to bring or permit any equipment, materials, tools, or supplies to remain upon any part of the work site if any hazard to aircraft, threat to airport security, or obstruction of airport maintenance and

operations, on or off the ground, would be created in the opinion of either the Commissioner or the Deputy Commissioner. Contractors must safeguard, and may be required to account for, all items brought beyond a security checkpoint, especially with respect to tools used in a terminal building.

3.6.1.4.4. Work on the Airfield

For any work on the airfield, between sunset and sunrise, any equipment and materials stored outside must be marked with red obstruction lights acceptable to the Commissioner and in conformity with all FAA requirements, including Advisory Circular 150/5345-43F. All obstruction lights must be kept continuously in operation between sunset and sunrise 7 days a week and also during any daylight periods when aircraft ceiling is below 500 feet and visibility is less than 5 miles. Information on ceiling and visibility may be obtained by the Contractor on request at the office of the Deputy Commissioner of Operations or from the FAA Control Tower Operator. Proper compliance with these obstruction light requirements is essential to the protection of aircraft and human life and the Contractor has the responsibility of taking the initiative at all times to be aware of ceiling and visibility conditions, without waiting for the FAA Control Tower Operator or any other City representative to ask the Contractor to post obstruction lights.

For any work on the airfield, the Contractor must furnish aircraft warning flags, colored orange and white, in two sizes, one size 2' x 3' for hand use, and one size 3' x 5'. Each separate group or individual in all work areas, regardless of whether or not near runways, taxiways or aprons, must display a flag which must be maintained vertical at all times. Each truck or other piece of equipment of the Contractor must have attached to it, in a vertical and clearly visible position, a warning flag of the larger size. Except as otherwise agreed by the Commissioner or his designee, all cranes or booms used for construction work on the airfield must be lowered to ground level and moved 200 feet off the runways, taxiways and aprons during all hours of darkness and during all daylight hours when the aircraft ceiling is below the minimums specified in this section.

The Contractor acknowledges the importance of fully complying with the requirements of this section in order to protect aircraft and human life, on or off the ground. Failure on the part of the Contractor to perform the work in accordance with the provisions of this section and to enforce same with regard to all subcontractors, material men, laborers, invitees and all other persons under the Contractor's control is an event of default.

3.6.1.4.5. Parking Restrictions

Prior to commencing work, the Contractor must provide the Deputy Commissioner in charge of the project with an estimate of the number of vehicles that will require parking. Contractors are encouraged to provide employee parking elsewhere and shuttle their employees to the work site. The Department of Aviation may, but is not required to, provide parking areas for a limited number of vehicles in designated storage areas. All other vehicles must be parked in the public parking lots at the Airport, and there will be no reduced rate or complimentary parking for such vehicles. Employees must not, at any time, park their personal automobiles, no matter how short the duration, in any drive, road, or any other non-parking lot location at the airport. Such vehicles will be subject to immediate towing at the employees expense.

3.6.2. Emergency Management and Communications (OEMC) Security Requirements

3.6.2.1. Identification of Workers and Vehicles

All employees and vehicles working within O.E.M.C facilities must be properly identified. All vehicles and personnel passes will be issued to the Contractor by the Executive Director, as required. Contractor, Subcontractors, and employees must return identification material to the Executive Director upon completion of their respective work within the Project, and in all cases, the Contractor must return all identification material to the Executive Director after completion of the

Project. Final Contract Payment will not be made until all passes issued have been returned to O.E.M.C Security.

3.6.2.2. Access to Facilities

For purposes of this section, "employee" refers to any individual employed or engaged by Contractor or by any Subcontractor. If the Contractor, or any employee, in the performance of this Contract, has or will have access to a Office of Emergency Management and Communications (O.E.M.C) facility, the City may conduct such background and employment checks, including criminal history record checks and work permit documentation, as the Executive Director of the Office of Emergency Management and Communications and the City may deem necessary, on the Contractor, any Subcontractor, or any of their respective employees. The Executive Director of the Office of Emergency Management and Communications has the right to require the Contractor to supply or provide access to any additional information the Executive Director deems relevant. Before beginning work on the project, Contractor must:

Provide the City with a list of all employees requiring access to enable the City to conduct such background and employment checks;

Deliver to the City consent forms signed by all employees who will work on the project consenting to the City's and the Contractor's performance of the background checks described in this Section; and

Deliver to the City consent forms signed by all employees who will require access to the O.E.M.C facility consenting to the searches described in this Section.

The Executive Director may preclude Contractor, any Subcontractor, or any employee from performing work on the project. Further, the Contractor must immediately report any information to the Executive Director relating to any threat to O.E.M.C infrastructure or facilities or the water supply of the City and must fully cooperate with the City and all governmental entities investigating the threat. The Contractor must, notwithstanding anything contained in the Contract Documents to the contrary, at no additional cost to the City, adhere, and cause its Subcontractors to adhere, to any security and safety guidelines developed by the City and furnished to the Contractor from time to time during the term of the Contract and any extensions of it.

Each employee whom Contractor wishes to have access to an O.E.M.C facility must submit a signed, completed "Area Access Application" to the O.E.M.C to receive a O.E.M.C Security Badge. If Contractor wishes a vehicle to have access to a O.E.M.C facility, Contractor must submit a vehicle access application for that vehicle. The applications will solicit such information as the Executive Director may require in his discretion, including name, address, date of birth (and for vehicles, driver's license and appropriate stickers). The Contractor is responsible for requesting and completing these forms for each employee who will be working at O.E.M.C facilities and all vehicles to be used on the job site. The Executive Director may grant or deny the application in his sole discretion. The Contractor must make available to the Executive Director, within one (1) day of request, the personnel file of any employee who will be working on the project.

At the Executive Director's request, the Contractor and Subcontractor must maintain an employment history of employees going back five years from the date Contractor began Work or Services on the project. If requested, Contractor must certify that it has verified the employment history as required on the form designated by the Executive Director. Contractor must provide the City, at its request, a copy of the employment history for each employee. Employment history is subject to audit by the City.

3.6.2.3. Security Badges and Vehicle Permits

O.E.M.C Security Badges and Vehicle Permits will only be issued based upon properly completed Area Access Application Forms. Employees or vehicles without proper credentials will not be allowed on O.E.M.C property.

The following rules related to Security Badges and Vehicle Permits must be adhered to:

A. Each employee must wear and display the O.E.M.C Security Badge issued to that employee on his or her outer apparel at all times.

B. At the sole discretion of the Executive Director and law enforcement officials, including but not limited to the Chicago Police Department, Cook County Sheriffs Office, Illinois State Police or any other municipal, state or federal law enforcement agency, all vehicles (and their contents) are subject to interior and/or exterior inspection entering or exiting O.E.M.C facilities, and all employees and other individuals entering or exiting O.E.M.C facilities are subject to searches. Vehicles may not contain any materials other than those needed for the project. The Executive Director may deny access to any vehicle or individual in his sole discretion.

C. All individuals operating a vehicle on O.E.M.C property must be familiar and comply with motor driving regulations and procedures of the State of Illinois and the City of Chicago. The operator must be in possession of a valid, state-issued Motor Vehicle Operator's Driver License.

D. All required City stickers and State Vehicle Inspection stickers must be valid.

E. Individuals must remain within their assigned area and haul routes unless otherwise instructed by the City.

F. Access to the Work sites will be as shown or designated on the Contract Documents Drawings or determined by the Executive Director. The Executive Director may deny access when, in his sole discretion, the vehicle or individual poses some security risk to O.E.M.C.

3.6.2.4. Gates and Fences

Whenever the Contractor receives permission to enter O.E.M.C property in areas that are exit/entrance points not secured by the City, the Contractor may be required to provide gates that comply with O.E.M.C design and construction standards. Contractor must provide a licensed and bonded security guard, subject to the Executive Director's approval and armed as deemed necessary by the Executive Director, at the gates when the gates are in use. O.E.M.C Security will provide the locks. Failure to provide and maintain the necessary security will result in an immediate closure by O.E.M.C personnel of the point of access.

Stockpiling materials and parking of equipment or vehicles near O.E.M.C security fencing is prohibited.

Any security fencing, gates, or alarms damaged by the Contractor or its Subcontractors must be manned by a licensed and bonded security guard of the Contractor at Contractor's expense until the damaged items are restored. Contractor must restore them to their original condition within an eight (8) hour period from the time of notice given by the Executive Director.

Temporary removal of any security fencing, gate or alarm to permit construction must be approved by the Executive Director, and Contractor must man the site by a licensed and bonded security guard, approved by and armed as deemed necessary by the Executive Director, at Contractor's expense, on a twenty-four (24) hour basis during the period of temporary removal. Contractor must restore the items removed to their original condition when construction is completed.

3.6.2.5. Hazardous or Illegal Materials

Unauthorized hazardous or illegal materials, including but not limited to hazardous materials as defined in 49 C.F.R. Parts 100-185 (e.g. explosives, oxidizers, radiological materials, infectious materials), contraband, firearms and other weapons, illegal drugs and drug paraphernalia, may not be taken on O.E.M.C property. Alcoholic beverages are also prohibited.

3.6.3. Chicago Police Department Security Requirements

As part of Police operations and security, the Contractor must obtain from the Police Department, Security Badges for each of its employees, subcontractors, material men, invitees or any person(s) over whom Contractor has control, which must be visibly displayed at all times while at any Police Department facility. No person will be allowed beyond security checkpoints without a valid Security Badge. Each such person must submit signed and properly completed application forms to receive Security Badges. The application forms will solicit such information as the Superintendent may require; including but not limited to name, address, date of birth (driver's license). The Contractor is responsible for requesting and completing the form for each employee and subcontractors employee. The Superintendent may grant or deny the application in his sole discretion. The Contractor must make available to the Superintendent, within one (1) day of request, the personnel file of any employee who will be working on the project.

In addition to other rules and regulations, the following rules related to Security Badges, must be adhered to:

A. Each person must wear and display his or her Security Badge on their outer apparel at all times while at any Chicago Police Department facility.

B. Individuals must remain within their assigned area unless otherwise instructed by the Chicago Police Department.

3.6.4. Department of Water Management ("DOWM") Security Requirements

3.6.4.1. Identification of Workers and Vehicles

All employees and vehicles working within DOWM facilities must be properly identified. All vehicles and personnel passes will be issued to the Contractor by the Commissioner, as required. Contractor, Subcontractors, and employees must return identification material to the Commissioner upon completion of their respective work within the Project, and in all cases, the Contractor must return all identification material to the Commissioner after completion of the Project. Final Contract Payment will not be made until all passes issued have been returned to DOWM Security.

3.6.4.2. Access to Facilities

For purposes of this section, "employee" refers to any individual employed or engaged by Contractor or by any Subcontractor. If the Contractor, or any employee, in the performance of this Contract, has or will have access to a Department of Water Management (DOWM) facility, the City may conduct such background and employment checks, including criminal history record checks and work permit documentation, as the Commissioner of the Department of Water Management and the City may deem necessary, on the Contractor, any Subcontractor, or any of their respective employees. The Commissioner of the Department of Water Management has the right to require the Contractor to supply or provide access to any additional information the Commissioner deems relevant. Before beginning work on the project, Contractor must:

Provide the City with a list of all employees requiring access to enable the City to conduct such background and employment checks;

Deliver to the City consent forms signed by all employees who will work on the project consenting to the City's and the Contractor's performance of the background checks described in this Section; and

Deliver to the City consent forms signed by all employees who will require access to the DOWM facility consenting to the searches described in this Section.

The Commissioner may preclude Contractor, any Subcontractor, or any employee from performing work on the project. Further, the Contractor must immediately report any information to the Commissioner relating to any threat to DOWM infrastructure or facilities or the water supply of the City and must fully cooperate with the City and all governmental entities investigating the threat. The Contractor must, notwithstanding anything contained in the Contract Documents to the contrary, at no additional cost to the City, adhere, and cause its Subcontractors to adhere, to any

security and safety guidelines developed by the City and furnished to the Contractor from time to time during the term of the Contract and any extensions of it.

3.6.4.3. Security Badges and Vehicle Permits

Each employee whom Contractor wishes to have access to a DOWM facility must submit a signed, completed "Area Access Application" to the DOWM to receive a DOWM Security Badge. If Contractor wishes a vehicle to have access to a DOWM facility, Contractor must submit a vehicle access application for that vehicle. The applications will solicit such information as the Commissioner may require in his discretion, including name, address, date of birth (and for vehicles, driver's license and appropriate stickers). The Contractor is responsible for requesting and completing these forms for each employee who will be working at DOWM facilities and all vehicles to be used on the job site. The Commissioner may grant or deny the application in his sole discretion. The Contractor must make available to the Commissioner, within one (1) day of request, the personnel file of any employee who will be working on the project.

At the Commissioner's request, the Contractor and Subcontractor must maintain an employment history of employees going back five years from the date Contractor began Work or Services on the project. If requested, Contractor must certify that it has verified the employment history as required on the form designated by the Commissioner. Contractor must provide the City, at its request, a copy of the employment history for each employee. Employment history is subject to audit by the City.

DOWM Security Badges and Vehicle Permits will only be issued based upon properly completed Area Access Application Forms. Employees or vehicles without proper credentials will not be allowed on DOWM property.

The following rules related to Security Badges and Vehicle Permits must be adhered to:

A. Each employee must wear and display the DOWM Security Badge issued to that employee on his or her outer apparel at all times.

B. At the sole discretion of the Commissioner and law enforcement officials, including but not limited to the Chicago Police Department, Cook County Sheriffs Office, Illinois State Police or any other municipal, state or federal law enforcement agency, all vehicles (and their contents) are subject to interior and/or exterior inspection entering or exiting DOWM facilities, and all employees and other individuals entering or exiting DOWM facilities are subject to searches. Vehicles may not contain any materials other than those needed for the project. The Commissioner may deny access to any vehicle or individual in his sole discretion.

C. All individuals operating a vehicle on DOWM property must be familiar and comply with motor driving regulations and procedures of the State of Illinois and the City of Chicago. The operator must be in possession of a valid, state-issued Motor Vehicle Operator's Driver License.

D. All required City stickers and State Vehicle Inspection stickers must be valid.

E. Individuals must remain within their assigned area and haul routes unless otherwise instructed by the City.

F. Access to the Work sites will be as shown or designated on the Contract Documents Drawings or determined by the Commissioner. The Commissioner may deny access when, in his sole discretion, the vehicle or individual poses some security risk to DOWM.

3.6.4.4. Gates and Fences

Whenever the Contractor receives permission to enter DOWM property in areas that are exit/entrance points not secured by the City, the Contractor may be required to provide gates that comply with DOWM design and construction standards. Contractor must provide a licensed and

bonded security guard, subject to the Commissioner's approval and armed as deemed necessary by the Commissioner, at the gates when the gates are in use. DOWM Security will provide the locks. Failure to provide and maintain the necessary security will result in an immediate closure by DOWM personnel of the point of access.

Stockpiling materials and parking of equipment or vehicles near DOWM security fencing is prohibited.

Any security fencing, gates, or alarms damaged by the Contractor or its Subcontractors must be manned by a licensed and bonded security guard of the Contractor at Contractor's expense until the damaged items are restored. Contractor must restore them to their original condition within an eight (8) hour period from the time of notice given by the Commissioner.

Temporary removal of any security fencing, gate or alarm to permit construction must be approved by the Commissioner, and Contractor must man the site by a licensed and bonded security guard, approved by and armed as deemed necessary by the Commissioner, at Contractor's expense, on a twenty-four (24) hour basis during the period of temporary removal. Contractor must restore the items removed to their original condition when construction is completed.

3.6.4.5. Hazardous or Illegal Materials

Unauthorized hazardous or illegal materials, including but not limited to hazardous materials as defined in 49 C.F.R. Parts 100-185 (e.g. explosives, oxidizers, radiological materials, infectious materials), contraband, firearms and other weapons, illegal drugs and drug paraphernalia, may not be taken on DOWM property. Alcoholic beverages are also prohibited.

ARTICLE 4. TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES CONTRACTS

4.1. Providing Services

The Contractor must not honor any verbal requests for Services or perform or bill for any Services without receipt of a written Purchase Order issued by the Department. Any work performed by the Contractor without a written Purchase Order is done at the Contractor's risk. Consequently, in the event a written Purchase Order is not provided by the City, the Contractor releases the City form any liability whatsoever to pay for any work performed provided without a Purchase Order.

If indicated in the Scope or Detailed Specifications, Services will be determined on an as-needed basis and as described on a Task Order Services Request ("TOSR") (which process is described in the Scope or Detailed Specifications). Only if the Contractor has successfully been awarded a Task Order will it then receive a Purchase Order (a.k.a. purchase order release, blanket order release, or sub-order) authorizing the Contractor to perform Services. Purchase Orders will indicate the specification number, purchase order number, project description, milestones, deadlines, funding, and other such pertinent information.

4.2. Standard of Performance

Contractor must perform all Services required of it under this Contract with that degree of skill, care and diligence normally shown by a Contractor in the community performing services of a scope and purpose and magnitude comparable with the nature of the Services to be provided under this Contract. Contractor acknowledges that it may be entrusted with or may have access to valuable and confidential information and records of the City and with respect to that information only, Contractor agrees to be held to the standard of care of a fiduciary.

Contractor must ensure that all Services that require the exercise of professional skills or judgment are accomplished by professionals qualified and competent in the applicable discipline and appropriately licensed, if required by law. Contractor must provide the City copies of any such licenses. Contractor remains responsible for the professional and technical accuracy of all Services or Deliverables furnished, whether by Contractor or its Subcontractors or others on its behalf. All Deliverables must be prepared in a form and content satisfactory to the Department and delivered in a timely manner consistent with the requirements of this Contract.

If Contractor fails to comply with the foregoing standards, Contractor must perform again, at its own expense, all Services required to be re-performed as a direct or indirect result of that failure. Any review, approval, acceptance or payment for any of the Services by the City does not relieve Contractor of its responsibility for the professional skill and care and technical accuracy of its Services and Deliverables. This provision in no way limits the City's rights against Contractor either under this Contract, at law or in equity.

Contractor shall not have control over, or charge of, and shall not be responsible for, construction means, methods, schedules, or delays, or for safety precautions and programs in connection with construction work performed by others.

To the extent they exist, the City may furnish structural, mechanical, chemical, air, and water pollution and hazardous materials tests, and other laboratory and environmental tests, inspections, and reports required by law or by authorities having jurisdiction over any work, or reasonably requested by Contractor.

In the event Contractor's Services include any remodeling, alteration, or rehabilitation work, City acknowledges that certain design and technical decisions shall be made on assumptions based on available documents and visual observations of existing conditions.

4.3. Deliverables

In carrying out its Services, Contractor must prepare or provide to the City various Deliverables. "Deliverables" include work product, produced by Contractor, including but not limited to written reviews, reports, recommendations, charts, analysis, designs, plans, specifications, drawings, or other similar products.

The City may reject Deliverables that do not include relevant information or data, or do not include all documents or other materials specified in this Contract or reasonably necessary for the purpose for which the City made this Contract. If the City determines that Contractor has failed to comply with the foregoing standards, the City has 30 days from the discovery to notify Contractor of its failure. If Contractor does not correct the failure within 30 days after receipt of notice from the City specifying the failure, then the City, by written notice, may treat the failure as a default of this Contract.

Partial or incomplete Deliverables may be accepted for review only when required for a specific and well-defined purpose for the benefit of the City and when consented to in advance by the City. Such Deliverables will not be considered as satisfying the requirements of this Contract and the City's acceptance of partial or incomplete Deliverables in no way relieves Contractor of its commitments under this Contract.

4.4. Additional Services

Additional Services means those Services which are within the general scope of Services of this Contract, but beyond the description of services in the Detailed Specifications and all services reasonably necessary to complete the Additional Services to the standards of performance required by this Contract. Any Additional Services requested by the Department require the approval by the City through a formal amendment pursuant to Section 1.4.9 of the Standard Terms and Conditions before Contractor is obligated to perform those Additional Services and before the City becomes obligated to pay for those Additional Services.

4.5. Timeliness of Performance

Contractor must provide the Services and Deliverables within the term and within the time limits required under this Contract, pursuant to Detailed Specifications or as specified in the applicable Task Order or Purchase Order. Further, Contractor acknowledges that TIME IS OF THE ESSENCE and that the failure of Contractor to comply with the time limits may result in economic or other losses to the City.

Neither Contractor nor its agents, employees or Subcontractors are entitled to any damages from the City, nor is any party entitled to be reimbursed by the City, for damages, charges or other losses or expenses incurred by Contractor by reason of delays or hindrances in the performance of the Services, whether or not caused by the City.

4.6. Suspension

The City may at any time request that Contractor suspend its Services, or any part of them, by giving 15 days prior written notice to Contractor or upon informal oral, or even no notice, in the event of emergency. No costs incurred after the effective date of such suspension are allowed. Contractor must promptly resume its performance of the Services under the same terms and conditions as stated in this Contractor upon written notice by the Chief Procurement Officer and such equitable extension of time as may be mutually agreed upon by the Chief Procurement Officer and Contractor when necessary for continuation or completion of Services. Any additional costs or expenses actually incurred by Contractor as a result of recommencing the Services must be treated in accordance with the compensation provisions of this Contract.

No suspension of this Contract is permitted in the aggregate to exceed a period of 45 days within any one year of this Contract. If the total number of days of suspension exceeds 45 days, Contract by written notice to the City may treat the suspension as an early termination of this Agreement under the "Standard Terms and Conditions."

4.7. Personnel

4.7.1. Adequate Staffing

Contractor must, upon receiving a fully executed copy of this Contract, assign and maintain during the term of this Contract and any extension of it an adequate staff of competent personnel that is fully equipped, licensed as appropriate, available as needed, qualified and assigned to perform the Services. The level of staffing may be revised from time to time by notice in writing from Contractor to the City with a detailed explanation and/or justification only with prior written consent of the Commissioner, which consent the Commissioner will not withhold unreasonably. The City may also from time to time request that the Contractor adjust staffing levels to reflect workload and level of required Services or Additional Services.

4.7.2. Key Personnel

In selecting the Contractor for this Contract the City relied on the qualifications and experience of those persons identified by Contractor by name as performing the Services ("Key Personnel"). Contractor must not reassign or replace Key Personnel without the written consent of the Commissioner, which consent the Commissioner will not unreasonably withhold. The Commissioner may at any time in writing notify Contractor that the City will no longer accept performance of Services under this Contract by one or more Key Personnel. Upon that notice Contractor must immediately suspend the services of such person(s) and provide a replacement of comparable qualifications and experience who is acceptable to the Commissioner. Contractor's Key Personnel, if any, are identified in the Scope of Services / Detailed Specifications portion of this Contract.

4.7.3. Salaries and Wages

Contractor and any subcontractors must pay all salaries and wages due all employees performing Services under this Contract unconditionally and at least once a month without deduction or rebate on any account, except only for those payroll deductions that are mandatory by law or are permitted under applicable law and regulations. If in the performance of this Contract Contractor underpays any such salaries or wages, the Comptroller for the City may withhold, out of payments due to Contractor, an amount sufficient to pay to employees underpaid the difference between the salaries or wages required to be paid under this Agreement and the salaries or wages actually paid these employees for the total number of hours worked. The amounts withheld may be disbursed by the Comptroller for and on account of Contractor to the respective employees to whom they are due. The parties acknowledge that this paragraph is solely for the benefit of the City and that it does not grant any third party beneficiary rights.

4.8. Ownership of Documents

Except as otherwise agreed to in advance by the Commissioner in writing, all Deliverables, data, findings or information in any form prepared or provided by Contractor or provided by City under this Contract are property of the City, including all copyrights inherent in them or their preparation. During performance of its Services, Contractor is responsible for any loss or damage to the Deliverables, data, findings or information while in Contractor's or any Subcontractor's possession. Any such lost or damaged Deliverables, data, findings or information must be restored at Contractor's expense. If not restorable, Contractor must bear the cost of replacement and of any loss suffered by the City on account of the destruction. Notwithstanding the foregoing, Contractor shall retain all rights to its standard details and specifications and proprietary software, and nothing in this section shall be construed to be a transfer of rights which are not owned by Contractor.

4.9. Copyright Ownership and other Intellectual Property

Contractor and the City intend that, to the extent permitted by law, the Deliverables to be produced by Contractor at the City's instance and expense under this Contract are conclusively considered "works made for hire" within the meaning and purview of Section 101 of the United States Copyright Act, 17 US.C. §101 et seq., and that the City will be the sole copyright owner of the Deliverables and of aspects, elements and components of them in which copyright can subsist, and which are owned and transferable by, and of all rights to apply for copyright registration or prosecute any claim of infringement. To the extent that any Deliverable does not qualify as a "work made for hire", Contractor hereby irrevocably grants, conveys, bargains, sells, assigns, transfers and delivers to the City, its successors and assigns, all right, title and interest in and to the copyright and all U.S. and foreign copyright registrations, copyright applications and copyright renewals for them, and other intangible, intellectual property embodied in or pertaining to the Deliverables prepared for the City under this Contract and all goodwill relating to them, free and clear of any liens, claims or other encumbrances, to the fullest extent permitted by law. Notwithstanding the foregoing, Contractor shall retain all rights to its standard details and specifications and proprietary software, and nothing in this section shall be construed as a transfer of rights, which are not owned by Contractor. Contractor shall have no liability or duty whatsoever for any modification or change of the Deliverables or work, without Contractor's direct involvement and consent.

Contractor will, and will cause all of its Subcontractors, employees, agents and other persons within its control to, execute all documents and perform all acts that the City may reasonably request in order to assist the City in perfecting its rights in and to the copyrights relating to the Deliverables, at the sole expense of the City. Contractor warrants to the City, its successors and assigns, that, on the date of delivery, except as expressly stated otherwise in writing to the Commissioner or before that date: (a) Contractor will be the lawful owner of good and marketable title in and to the copyrights for the Deliverables it prepared, (b) Contractor will have the legal rights to fully assign the copyrights, (c) Contractor will not assign any copyrights and will not grant any licenses, exclusive or nonexclusive, to any other party (except pursuant to (3) below), (d) Contractor is not a party to any other agreements or subject to any other restrictions with respect to the Deliverables, (e) the Deliverables will be complete, entire and comprehensive within the standard of performance under Section 2.3 of this Contract, and (f) the Deliverables will constitute works of original authorship.

4.9.1. Patents

If any invention, improvement, or discovery of the Contractor or its Subcontractors is conceived or first actually reduced to practice during performance of or under this Contract, and that invention, improvement, or discovery is patentable under the laws of the United States of America or any foreign country, the Contractor must notify the City immediately and provide the City a detailed report regarding such invention, improvement, or discovery. If the City determines that patent protection for such invention, improvement, or discovery should be sought, Contractor agrees to seek patent protection for such invention, improvement, or discovery and to fully cooperate with the City throughout the patent process. The Contractor must transfer to the City, at no cost, the patent in any invention, improvement, or discovery developed under this Contract and any patent rights to which the Contractor purchases ownership with funds provided to it under this Contract.

4.9.2. Indemnity

Without limiting any of its other obligations under this Contract and in addition to any other obligations to indemnity under this Contract, Contractor must, upon request by the City, indemnify, save, and hold harmless the City, and if this Contract is federally funded the Federal Government, and their respective officers, agents, and employees acting within the scope of their original duties against any liability, including costs and expenses, resulting from any willful or intentional violation by the Contractor of proprietary rights, copyrights, or right of privacy, arising out of the publication, translation, reproduction, delivery, use or disposition of any Deliverables furnished under the Contract. The Contractor is not required to indemnify the City or Federal Government for any such liability arising out of the wrongful acts of employees or agents of the City or Federal Government.

4.9.3. Limitation of Liability

Contractor will have no liability to the City for losses arising out of any use by or through the City of Deliverables prepared by Contractor pursuant to this Contract for any project or purpose other than the project or purpose for which they were prepared.

4.10. Approvals

Whenever Contractor is required to obtain prior written approval, the effect of any approval that may be granted pursuant to Contractor's request is prospective only from the later of the date approval was requested or the date on which the action for which the approval was sought is to begin. In no event is approval permitted to apply retroactively to a date before the approval was requested.

4.11. Cooperation

Contractor must at all times cooperate fully with the City and act in the City's best interests. If this Contract is terminated for any reason, or if it is to expire on its own terms, Contractor must make every effort to assure an orderly transition to another provider of the services, if any, orderly demobilization of its own operations in connection with the services, uninterrupted provision of services during any transition period and must otherwise comply with the reasonable requests and requirements of the City in connection with the termination or expiration.

4.12. Compliance with the Americans with Disabilities Act and Other Laws Concerning Accessibility

Contractor covenants that all designs, plans and drawings produced or utilized under this Contract will address and comply with all federal, state and local laws and regulations regarding accessibility standards for persons with disabilities or environmentally limited persons including the following: the Americans with Disabilities Act of 1990, 42 U.S.C. § 12101 et seq. and the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities ("ADAAG"); the Architectural Barriers Act, Pub. L. 90-480 (1968), and the Uniform Federal Accessibility Standards ("UFAS"); and the Illinois Environmental Barriers Act, 410 ILCS 25/1 et seq., and all regulations promulgated thereunder , see Illinois Administrative Code, Title 71, Chapter 1, Section 400.110. If the above standards are inconsistent, Contractor must assure that its designs, plans, and drawings comply with the standard providing the greatest accessibility. Also, Contractor must, prior to construction, review the plans and specifications to insure compliance with these standards. If Contractor fails to comply with the foregoing standards, the City may, without limiting any of its remedies set forth in this contractor or otherwise available at law, in equity or by statute, require Contractor to perform again, at no expense, all services required to be re-performed as a direct or indirect result of such failure.

4.13. Reimbursement for Travel

In the event that reimbursable travel is required for this contract and authorized by the City, any travel expenses will reimbursed only in accordance with the then-current City of Chicago Travel Reimbursement Guidelines . The Guidelines may be downloaded from the Internet at: http://www.cityofchicago.org/Forms. The direct link is:
http://www.cityofchicago.org/content/dam/city/depts/dps/ContractAdministration/Forms/CityofChicago_TravelGuidelines.pdf.

4.14. Additional Terms For Tradeswork

4.14.1. Standard Working Hours

Pursuant to MCC Section 2-92-220 a standard working day consists of 8 hours for this Contract; shifts must be coordinated with the Department. No overtime or premium pay is allowed unless otherwise specified in the Detailed Specifications and authorized by the Commissioner.

4.14.2. Character of Workers

The Contractor must employ only competent and efficient workers and whenever, in the opinion of the City, any such worker is careless, incompetent, violates safety or security rules, obstructs the progress of the work or services to be performed under this Contract, acts contrary to instructions or acts improperly, or fails to follow the safety requirements of this Contract, the Contractor must, upon request of the City, discharge or otherwise remove such worker from the work or services to be performed under this Contract and must not use such worker again, except with the written consent of the City. The Contractor must not permit any person to work upon the work or services to be performed under this Contract or enter into any buildings connected therewith who is under the influence of intoxicating liquors or controlled substances.

4.14.3. Quality of Materials and Inspection

The City will have a right to inspect any material to be used in performance of the Services for this Contract.

The City is not responsible for the availability of any materials or equipment required under this Contract.

The Contractor is responsible for the meeting the contractual obligations and standards regarding the quality of all materials, components, or services performed under this Contract up to the time of final acceptance by the City.

Non-compliant materials, components, or Services may be rejected by the CPO and must be replaced or re-performed by the Contractor at no cost to the City.

The City shall provide written notice to the Contractor indicating the time period in which Contractor must, at its sole expense, remove from City premises, any materials or components rejected by the City.

Any and all labor and materials which may be required to correct or replace damaged, defective or non-conforming products must be provided by the Contractor at no cost to the City. The Contractor must correct or replace the incorrect, damaged or defective or non-conforming goods within seven business days of the return unless otherwise provided in the Detailed Specifications. The City of Chicago will not be subject to restocking charges.

Failure to correct or replace unacceptable goods, or repeated delivery of unacceptable goods, will be an event of default under this Contract.

4.14.4. Manufacturer's Warranty and Product Information

If in performance of the Services, the Contractor provides any goods, the Contractor must have, and must demonstrate upon request, that it has authorization to transfer product warranties to the City of Chicago. The Contractor is required to provide and transfer all documentation issued by the manufacturer for the products to be provided under this Contract. This includes the manufacturer's genuine parts/product information, recall notices, manuals, licenses, assemblies and/or accessories as supplied by the original equipment manufacturer (O.E.M.).

The Contractor must provide the original product warranty and related services for the goods provided under this Contract in accordance with the standard warranty regularly supplied.

4.14.5. Contractor's Warranties

If in performance of the Services, the Contractor provides any goods, the Contractor warrants that the title to the goods to be provided under this Contract is good and its transfer is rightful, and that the goods will be delivered free from any security interest or other encumbrance of which Contractor has not informed the City.

The Contractor expressly warrants that all goods shall be merchantable within the meaning of Article 2-314(2) of the Uniform Commercial Code in effect on the date they are ordered. In addition to all warranties that may be prescribed by law, the goods shall conform to specifications, drawings, and other description and shall be free from defects in materials and workmanship. Contractor also warrants that, except where the goods are produced pursuant to detailed designs furnished by the City, they will be free from defects in design. Such warranties, including warranties prescribed by law, shall run to City, its successors, assigns, customers, and to users of the goods.

At a minimum, the Contractor hereby warrants for a period of at least one year from the date of final acceptance by the City, that it will, at its own expense and without any cost to the City, replace all defective parts that may be required or made necessary by reason of defective design, material or workmanship, or by reason of non-compliance with the Contract Documents. The warranty period will commence on the first day the individual item is placed in service by the City. The City may revoke acceptance if the materials, goods, or components are later discovered not to be in conformance with this Contract.

For any construction work included in the Services, the Contractor's Warranty means the Contractor's representation as to the character and quality of the Services in accordance with the terms and conditions of the Contract Documents, and the Contractor's promise to repair and replace the work not in conformance with such representations. Without limiting the scope or duration of any Manufacturer's Warranty provided for specific parts of the work, all work furnished under this Contract is guaranteed by Contractor against defective materials and workmanship, improper installation or performance, and non-compliance with the Contract Documents for a period of one year. Unless otherwise specified, the one-year period will begin on the date of final acceptance by the Commissioner.

However, if at any time beyond the one-year Contractor's Warranty period, a latent defect in the work is discovered, the Contractor shall be responsible for re-performance, payment of damages, or such other remedy as deemed appropriate by the City.

4.14.5.1. Correction or Re-Performance of Services

If the Contractor has failed to properly perform the Services, upon direction in writing from the Commissioner, Contractor will promptly re-perform or correct all work or Services identified to be defective or as failing to conform to the standards set forth in the Contract Documents, whether observed before or after completion of the Services. The Contractor is responsible for all costs of correcting such defective or nonconforming Services, including costs associated with fixing any damages, re-performing the Services, and any costs required due to Contractor's inadequate performance.

4.14.5.2. Timeliness

The Contractor must provide the Services in the time-frame required in the Detailed Specifications. If Contractor's response and/or completion time for performance of the Services fails to meet this standard, the CPO may declare the Contractor in default.

4.14.5.3. Delay

If the City has caused the Contractor be obstructed or delayed in the commencement, prosecution or completion of the Services by any act or delay of the City or by order of the Commissioner, then the time herein fixed for the completion of said Services will be extended for an equivalent period of time.

It is otherwise understood that no extension of time will be granted to the Contractor unless Contractor, immediately upon knowledge of the causes of an unavoidable delay, first notifies the Commissioner and CPO in writing, stating the approximate expected duration of delay. Contractor shall not be entitled to an extension of time without such prior notification and request for extension.

The CPO and the Commissioner will determine the number of days, if any, that the Contractor has been delayed. Such determination when approved and authorized in writing by the Commissioner and CPO, will be final and binding.

It is further expressly understood and agreed that the Contractor shall not be entitled to any damages or compensation from the City, or be reimbursed for any loss or expense on account of any delay or delays resulting from any of the causes aforesaid.

4.14.6. Public Convenience

All Services will be conducted in a manner that minimizes dust, noise, and inconvenience to the normal activities of the facility where the Services are performed. The Contractor is responsible for conducting Services in such a manner as to minimize debris left in the public way and shall provide clean-up as required by the Commissioner. Whenever the Commissioner determines any type of operation constitutes a nuisance, the Contractor will immediately proceed to conduct its operations in an approved manner.

The Commissioner may at any time require additional provisions if such are deemed necessary for public safety or convenience.

4.14.7. Clean Up

The Contractor must, during the performance of Services, remove and dispose of all materials and the resultant dirt and debris on a daily basis and keep the work site(s) and adjacent premises in a clean condition satisfactory to the City. Upon completion of work activities, the Contractor must remove all materials, tools and machinery and restore the site to the same general condition that existed prior to the commencement of its operation.

4.14.8. Work Performed on City Property

Contractor's personnel will exercise safe and sound business practices with the skill, care, and diligence normally shown by professional technicians employed in the type of Services required under this Contract.

The Contractor will employ only competent and efficient employees, and whenever, in the opinion of the Commissioner, any employee is careless, incompetent, obstructs the progress of the Services, acts

contrary to instructions or conducts themselves improperly, the Contractor will, upon the request of the Commissioner, remove the employee from the premises and will not employ such employee again for the Services under this Contract, except with the written consent of the Commissioner.

The Contractor will not permit any person to enter any part of a City facility or property while under the influence of intoxicating liquors or controlled substances. The Contractor will not permit obnoxious behavior, or possession or consumption of alcoholic beverages or drugs anywhere on the site of any Services to be performed under this Contract.

The Commissioner has authority to request the Contractor to remove any worker who proves to be incompetent or negligent in his/her duties.

If required by the Detailed Specifications, the Contractor's employees or subcontractors are required to wear suitable uniforms during the time they are on duty on any City property.

The Contractor's employees or subcontractors must wear an identification badge at all times while on duty on any City property.

The Contractor's employees must have proper identification on their person before they will be allowed on any City property.

Smoking is prohibited in all City of Chicago facilities.

The Contractor will require that all employees refrain from disturbing papers on desks, opening desk drawers or cabinets.

While on City premises, the Contractor will not store any equipment, tools or materials without prior written authorization from the Commissioner. The City will not be responsible for or liable to pay the Contractor for any loss of equipment, tools or materials stored in unsecured areas without proper authorization.

4.14.9. Work In Progress

Any Services in progress at the termination date of the Contract will be completed by the Contractor in the most expedient method available. In no event will the Contractor be relieved of its obligations under this Contract until all Services requested prior to the expiration of the Contract has been completed and accepted by the Commissioner.

4.14.10. Clean Diesel Fleet MCC 2-92-595

If this Contract is for construction, demolition, restoration, repair, renovation, environmental remediation or environmental abatement of any building, structure, tunnel, excavation, roadway, bridge, transit station or parcel of land and the estimated value of this Contract is $2,000,000 or more:

A. Contractor must comply with the Clean Diesel Contracting Ordinance, MCC Section 2-92-595.

B. Contractor and any Subcontractor(s) must utilize Ultra Low Sulfur Diesel Fuel (ULSD) for any heavy-duty diesel-powered vehicle, non-road vehicle or non-road equipment used in the performance of the Contract.

C. Contractor and any Subcontractor(s) must minimize idling of motor vehicles and non-road vehicles used in the performance of the Contract during periods of inactivity, and must comply with the anti-idling requirements imposed by any applicable federal, state, or local law.

D. Contractor and any Subcontractor(s), may not use any of the following vehicles and equipment in the performance of the contract:

(i) any heavy-duty diesel vehicle not meeting or exceeding the US EPA's emission standards for heavy-duty diesel vehicles for the 1998 engine model year, unless such vehicle is fitted with a verified diesel emission control retrofit device; or

(ii) any non-road vehicle or non-road equipment not meeting or exceeding the US EPA's Tier 1 Non-road Diesel Standards, unless such vehicle or equipment is fitted with a verified diesel emission control retrofit device.

E. Any heavy-duty diesel vehicles, non-road vehicles and non-road equipment used in the performance of this Contract must incorporate such engine or retrofit technology so that the Contractor, through such engine or retrofit technology used directly by the Contractor and all subcontractors, shall have a minimum of 2.1 clean fleet score per a reporting period, as calculated by using the methodology described in MCC subsection 2-92-595(c)(5). Contractor may exclude from the calculation of the clean fleet score all of the heavy-duty diesel vehicles, non-road vehicles and non-road equipment used in the performance of the contract during a reporting period that are owned or leased by any firm that the CPO has granted a clean fleet score annual waiver certificate pursuant to MCC subsection 2-92-595 (f).

F. The City may conduct an audit of the Contractor or inspect any vehicle or equipment used in the performance of the Contract to ensure compliance with the requirements specified above. In the event that Contractor or any Subcontractor fails to utilize ULSD or fails to minimize idling or comply with anti-idling requirements, Contractor will be subject to liquidated damages of $5,000 per day for each violation and each day of noncompliance will be a separate violation; provided, however, the damages will not exceed $50,000 for any one vehicle or piece of equipment, as specified in MCC Section 2-92-595(e). Such liquidated damages are imposed not as a penalty but as an estimate of the damages that the City will sustain from delay in completion of the project and inspection and other enforcement costs, as well as the resultant damages to the public health of its citizens, which damages by their nature are not capable of precise proof. The City is authorized to withhold and deduct from monies otherwise payable to the contractor the amount of liquidated damages due to the City.

Contractor understands that pursuant to MCC subsection 2-92-595(e)(6), any person knowingly making a false statement of material fact to any City department with respect to compliance with the contract provisions specified in MCC subsection 2-92-595(e) Chicago may be fined not less than $1,000 or more than $5,000 for each statement.

4.14.11. Multi Project Labor Agreement (PLA)

The City has entered into the PLA with various trades regarding projects involving construction, demolition, maintenance, rehabilitation, and/or renovation work, as described in the PLA, a copy of which may be found on the City's website at: http://www.cityofchicago.org/dam/city/depts/dps/RulesRegulations/Multi-ProjectLaborAgreement-PLAandSignatoryUnions.pdf.

To the extent that this Contract involves a project that is subject to the PLA, Contractor acknowledges familiarity with the requirements of the PLA and its applicability to any Work under this Contract, and shall comply in all respects with the PLA.

ARTICLE 5. SCOPE OF WORK AND DETAILED SPECIFICATIONS

5.1. Scope of Services

This Contract is for Public Address System Upgrades for O'Hare International Airport.

More specifically, the Services that Consultant must provide are described in **Exhibit 1**, "Scope of Services and Time Limits for Performance."

This description of Services is intended to be general in nature and is neither a complete description of Contractor's Services nor a limitation on the Services that Contractor is to provide under this Contract.

5.2. List of Key Personnel

Key Personnel are (or are listed in) _____.

5.3. Term of Performance

This Contract takes effect as of the Effective Date and continues for _____ months, unless terminated earlier or extended pursuant to the terms of this contract.

The City will establish the start and expiration dates at the time of formal award and release of this contract.

5.4. Payment

5.4.1. Basis of Payment

The City will pay Contractor according to the Schedule of Compensation in the attached **Exhibit 2** for the completion of the Services in accordance with this Agreement, including the standard of performance found in "Special Conditions for Professional Services Contracts," above.

5.4.2. Method of Payment

Contractor must submit monthly invoices to the City for costs billed, as outlined in the Schedule of Compensation in **Exhibit 2**. The invoices must be in such detail as the City requests. The City will process payment within 60 days after receipt of invoices and all supporting documentation necessary for the City to verify the Services provided under this Agreement.

Contractor must not submit invoices for less than $500 unless a particular invoice is for last payment related to closeout of services.

5.4.3. Centralized Invoice Processing

Unless stated otherwise in the Detailed Specifications, this Contract is subject to Centralized Invoice Processing ("CIP"). Invoices must be submitted directly to the Comptroller's office by US Postal Service mail to the following address as appropriate:

Invoices for any City department other than the Department of Aviation:

Invoices
City of Chicago, Office of the City Comptroller
121 N. LaSalle St., Room 700, City Hall
Chicago, IL 60602

Invoices for the Department of Aviation:

Chicago Department of Aviation
10510 W. Zemke Blvd.
P.O. Box 66142
Chicago, IL 60666
Attn: Finance Department

OR

Invoices for any department, including Aviation, may be submitted via email to: invoices@cityofchicago.org with the word "INVOICE" in the subject line.

All invoices must be signed, marked "original," and include the following information or payment will be delayed:

- Invoice number and date
- Contract/Purchase Order number
- Blanket Release number (if applicable)
- Vendor name and/or number
- Remittance address
- Name of City Department that ordered the goods or services
- Name and phone number of your contact at the ordering department
- Invoice quantities, commodity codes, description of deliverable(s)
- Amount due
- Receipt number (provided by the ordering department after delivery of goods/services)

Invoice quantities, service description, unit of measure, pricing and/or catalog information must correspond to the terms of the Bid Page(s).

If applicable, if invoicing Price List/Catalog items, indicate Price List/Catalog number, item number, Price List/Catalog date, and Price List/Catalog page number on the invoice.

Invoices for over-shipments or items with price/wage escalations will be rejected unless the Contract includes a provision for such an adjustment.

Freight, handling and shipping costs are not to be invoiced; deliveries are to be made F.O.B., City of Chicago. The City of Chicago is exempt from paying State of Illinois sales tax and Federal excise taxes on purchases.

Contractor must not submit invoices for less than $500 unless a particular invoice is for last payment related to closeout of services.

5.4.4. Criteria for payment
The reasonableness, allocability, and allowability of any costs and expenses charged by Contractor under this contract will be determined by the Chief Procurement Officer and the Commissioner in their sole discretion.

In the event of a dispute between Contractor and the City as to whether any particular charge will be paid, or as to whether the amount of such charge is reasonable, allocable to the services under the contract, or allowable, the Contractor must, and the Department may, refer such dispute to the Chief Procurement Officer for resolution in accordance with the Contract Disputes section of this contract. The City will not withhold payment for undisputed sums on such invoice while a dispute is being resolved.

5.5. Funding
The source of funds for payments under this Contract is Fund number **86-751-85-4971-9071-0140**. Payments under this Agreement must not exceed $_____ without a written amendment in accordance with the Amendments section of the "Standard Terms and Conditions" above. Funding for this Contract is subject to the availability of funds and their appropriation by the City Council of the City.

ARTICLE 6. SPECIAL CONDITIONS REGARDING MINORITY BUSINESS ENTERPRISE COMMITMENT AND WOMEN BUSINESS ENTERPRISE COMMITMENT FOR COMMODITIES OR SERVICES

PLACEHOLDER PAGE

ARTICLE 7. INSURANCE REQUIREMENTS

PLACEHOLDER PAGE**.**

ARTICLE 8. SIGNATURE PAGE

Contract Number: <<click and type number>>

Specification Number: <<click and type number>>

Contractor (Vendor) Name: <<click and type name>>

Total Amount (Value): <<click and type number>>

Fund Chargeable: <<click and type number>>

SIGNED at Chicago, Illinois:

CONTRACTOR:
<<click and type name>>

By: _____

Name: _____

Its: _____

Attest: _____

State of _____; County of _____

This instrument was acknowledged before me on _____ (date) by _____

as President (or other authorized officer) and _____ as Secretary of

_____ (name of party on behalf of whom instrument was executed).

_____ _____
Notary Public Commission Expires

CITY OF CHICAGO

By: _____
Mayor Date

_____
Comptroller Date

_____
Chief Procurement Officer Date

EXHIBITS

Exhibits follow this page. Remainder of page intentionally blank.

EXHIBIT 1: SCOPE OF WORK

PLACEHOLDER PAGE

EXHIBIT 2: COMPENSATION

PLACEHOLDER PAGE

EXHIBIT 3: INSURANCE CERTIFICATE OF COVERAGE

Named Insured:_____ Specification #: _____
Address:_____ RFP:_____
(Number and Street) Project #:_____
_____ Contract #:_____
(City) (State) (ZIP)

Description of Operation/Location	

The insurance policies and endorsements indicated below have been issued to the designated named insured with the policy limits as set forth herein covering the operation described within the contract involving the named insured and the City of Chicago. The Certificate issuer agrees that in the event of cancellation, non-renewal or material change involving the indicated policies, the issuer will provide at least sixty (60) days prior written notice of such change to the City of Chicago at the address shown on this Certificate. This certificate is issued to the City of Chicago in consideration of the contract entered into with the named insured, and it is mutually understood that the City of Chicago relies on this certificate as a basis for continuing such agreement with the named insured:

Type of Insurance	Insurer Name	Policy Number	Expiration Date	Limits of Liability All Limits in Thousands
General Liability [ ] Claims made [ ] Occurrence [ ] Premise-Operations [ ] Explosion/Collapse Underground [ ] Products/Completed-Operations [ ] Blanket Contractual [ ] Broad Form Property Damage [ ] Independent Contractors [ ] Personal Injury [ ] Pollution				CSL Per Occurrence $ _____ General Aggregate $ _____ Products/Completed Operations Aggregate $ _____
Automobile Liability				CSL Per Occurrence $ _____
[ ] Excess Liability [ ] Umbrella Liability				Each Occurrence $ _____
Worker=s Compensation and Employer=s Liability				Statutory/Illinois Employers Liability $ _____
Builders Risk/Course of Construction				Amount of Contract
Professional Liability				$ _____
Owner Contractors Protective				$ _____
Other				$ _____

a) Each Insurance policy required by this agreement, excepting policies for worker=s compensation and professional liability, will read: AThe City of Chicago is an additional insured as respects operations and activities of, or on behalf of the named insured, performed under contract with or permit from the City of Chicago.@

b) The General, Automobile and Excess/Umbrella Liability Policies described provide for severability of Interest (cross liability) applicable to the named insured and the City.

c) Workers Compensation and Property Insurers shall waive all rights of subrogation against the City of Chicago.

d) The receipt of this certificate by the City does not constitute agreement by the City that the insurance requirements in the contract have been fully met, or that the insurance policies indicated by this certificate are in compliance with all contract requirements.

Name and Address of Certificate Holder and Recipient of Notice

Certificate Holder/Additional Insured
City of Chicago
Procurement Department
121 N. LaSalle St., #806
Chicago, IL 60602

Signature of Authorized Rep. _____
Agency/Company: _____
Address _____
Telephone _____

For City use only

Name of City Department requesting certificate: (Using Dept.) _____
Address: _____ ZIP Code: _____ Attention: _____

EXHIBIT 4: ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT(S)

PLACEHOLDER PAGE

EXHIBIT 5: MBE / WBE COMPLIANCE PLAN

PLACEHOLDER PAGE

Exhibit 7: Project Reference Form

Respondent must provide comprehensive information for at least three (3) projects of similar type, scope and magnitude as required pursuant to this RFP. If any of these projects can be reviewed on-line, please provide the URL for such project. Respondent must provide detail about each project referenced, including a brief description of the project, the date on which the project was performed and completed, the location of the project, the nature and extent of Respondent's involvement in the project, the total dollar value of the project, the Key Personnel involved and their roles in the project, and three (3) client references for the project(s). The Respondent must be able to demonstrate completion of the projects identified. Experience will not be considered unless complete reference data is provided (name, position, phone number and e-mail address).

REFERENCES:

Project Description:

Date of Performance: _____

Date of Completion: _____

Project Location: _____

Respondent's Involvement in Project:

Dollar Value of Project and Your Firm's Contract Value: _____

Key Personnel Involved and Role in Project: _____

Client References (provide three):

Name:_____Title: _____
Address: _____ Telephone:_____E-Mail: __

Name:_____Title: _____
Address: _____ Telephone:_____E-Mail: __

Name:_____Title: _____
Address: _____ Telephone:_____E-Mail: __

Exhibit 8: Chicago Department of Aviation's Construction Safety Manual

2014
CONSTRUCTION SAFETY MANUAL

RAHM EMANUEL
Mayor
City of Chicago

ROSEMARIE S. ANDOLINO
Commissioner
Chicago Department of Aviation

D I S C L A I M E R N O T I C E

The information contained herein was prepared and presented with reasonable care and is based on the most reliable information available to the author. The City of Chicago, the Chicago Department of Aviation (CDA) and the Chicago Airports Resources Enterprise Plus, LLC (CARE Plus, LLC) make no warranty, expressed or implied, of the fitness, accuracy or completeness of this information. Judgments as to the suitability of the information herein for the user's purposes are necessarily the user's responsibility.

I N T R O D U C T I O N

The Contractor shall have sole and complete responsibility for the implementation of a worksite safety plan. The Contractor shall take necessary precautions for the health and safety of employees and fully comply with applicable provisions of:

- All sections of 29 CFR 1926-OSHA Construction Industry Safety and Health Standards 29 CFR 1910-OSHA General Industry Safety and Health Standards
- FAA Advisory Circular 150/5-170-2C Operation Safety of Airports During Contract
- National Fire Protection Association codes
- City of Chicago Fire Prevention Code
- National Electrical Code, all applicable American National Standards Institute standards
- City of Chicago Building Code
- The CDA Construction Safety manual
- All standards or codes referred to in the listed document
- Any other applicable standards

Due to the changing nature of health and safety regulations, and because new information is constantly becoming available, this plan is subject to change without notice.

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I. GENERAL DEFINITIONS

A. Airport means O'Hare International Airport and Chicago Midway Airport.

B. CAS means the Chicago Airport System (CAS), which includes O'Hare International Airport, Chicago Midway Airport.

C. Competent Person means one who is trained to identify existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. Such persons will be available on site whenever work requiring a Competent Person is being done (scaffolding, excavation, confined space, fall protection, respiratory protection, or any other operation identified by CDA Safety).

D. Construction Manager or CM means that entity identified in Part III, Division I of the Contract Documents (typically in section 01010), the entities that the City has contracted with to provide construction management services for the Chicago Airport System.

E. Contractor means the employer awarded the contract to complete a project from the owner through their Construction Manager.

F. Contractor's Safety Program means the program, covering worksite safety and property damage prevention, that the Contractor must submit to the Chicago Department of Aviation as required by General Conditions Article XIV.B.1.a.

G. Contractor's Safety Representative means the person assigned by the Contractor to be the Safety Representative for the project.

H. Employee means any person or persons on the payroll of any participant that is under contract with the Owner through the Construction Manager or the Contractor.

I. Jobsite means the location where work is expressly required under the applicable contract documents.

J. CM Manager of Safety for a Project means the person or entity who is notified in writing he (or it) has been so designated by CDA Safety.

K. Participant means the Contractor, Subcontractor or their employees, whom are under contract with the Owner through the Construction Manager.

L. CDA Safety means City of Chicago/CDA Safety Department Representative.

M. Subcontractor means any person or persons, partnership, joint venture, corporation, or other entity, whom performs work at the jobsite, under contract to either the Contractor or one of its Subcontractors.

N. Vendors, Suppliers and Materials Dealers means those persons or entities and/or their employees, whose activities on the jobsite are solely for the purpose of loading, hauling and/or unloading of materials or equipment at or from the jobsite.

O. Designated Representative means Construction Manager or CM – (CARE Plus, LLC).

P. Onsite means the location where the work is in progress.

II. STATEMENT OF POLICY AND INTENT

The CAS Manual reflects a desire by CAS to prevent injuries to persons and to prevent damage to property and equipment.

CAS considers no phase of construction or administration of greater importance than accident prevention and asserts that accidents which result in personal injury and damage to property and equipment represent needless waste and loss. It shall be the policy of CAS to conduct all operations safely and thereby prevent injuries to persons and damage to property.

Planning for safety shall start with the design and continue through purchasing, fabrication and construction in all phases of CAS projects. All practical steps shall be taken to maintain a safe place to work. The Contractors must accept the responsibility for the prevention of accidents on work under their direction and shall be responsible for the thorough safety training of their employees.

The objective of this policy is to establish throughout the entire CAS system the concept that the prevention of accidents and protection of property is most important and therefore shall receive top priority, support and participation.

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III. PROGRAM OBJECTIVES

The CAS Construction Safety Manual has been created to coordinate the elimination or reduction of hazards and risks associated with the construction of the CAS projects, prevent accidents, reduce employee injury, prevent damage to property, promote maximum efficiency, and affect savings by the reduction of unplanned business interruption.

Only active participation by CAS and the Contractor's supervisory staffs and employees will make the program effective. Active participation will also assist the participants in performing the following tasks:

- Providing a safe environment for employees to perform high quality work.
- Using safety planning as a tool to reduce bodily injury and property damage.
- Providing inspections to locate and abate unsafe conditions and practices.
- Protecting the public and property in the area of all staging and construction sites.
- Maintaining mandatory personal protective equipment programs.
- Using incident investigation information to abate deficiencies and increase controls in order to prevent similar accident recurrence.

NOTE: The CAS Construction Safety Manual does not supersede the Contractor's Safety Program except where the CAS Construction Safety Manual exceeds the requirements of the Contractor's program. The Contractor shall have first and foremost responsibility to enforce the more stringent safety program.

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IV. RESPONSIBILITIES

A. CHICAGO AIRPORT SYSTEM

CDA Safety Staff shall coordinate safety on Chicago Airport System projects. The CM Manager of Safety shall serve as liaison to the Managing Deputy Commissioner of Safety / Security or their designee. The CM's Manager of Safety shall be responsible for monitoring and coordinating the safety and property damage prevention program on projects the CM is assigned.

The CM Manager of Safety shall assist the CDA Commissioner of Safety with administration of the policies and procedures as established by this Construction Safety Manual.

The CM Manager of Safety shall monitor and evaluate the Contractor's Safety Program.

The CM Manager of Safety shall review the Contractor's Safety Program for compliance with safety regulations, property damage prevention and this written program.

The CM Manager of Safety shall provide monitoring of the Contractor's safety orientation program for Contractor's employees which includes a review of specific project issues, including but not limited to:

- Hazards present in their work assignments and the general work area.
- Instruction in the proper selection and use of personal protective equipment.
- Methods of reporting any unsafe conditions/practices the workers may encounter.
- Methods of reporting injuries and or illness and/or property damage incidents.
- Assisting the City Risk Manager with administration of Owner Controlled Insurance Programs when used for the project.

The CM Manager of Safety may collect and maintain copies of records with regards to safety and insurance as required by this program, and shall produce periodic reports concerning the performance of the Contractors engaged in CAS projects.

The CM Manager of Safety may conduct regularly scheduled meetings of all Contractors/subcontractors to review and discuss safety and property damage prevention. This may be a meeting dedicated exclusively to those subjects or as an integral part of the routine scheduling/planning meetings. A safety and property damage prevention meeting must be held at least once a month and minutes of the meetings shall be kept.

The CM Manager of Safety and the Chicago Department of Aviation Safety Manager shall function as part of the project job planning team with emphasis on safety and property damage prevention.

The CM Manager of Safety or CM Safety Staff shall inspect construction sites for unsafe conditions or practices, and document that corrective action is taken where deficiencies are found.

The CM Manager of Safety shall forward the results of monitoring and status of corrective action to the CDA Safety Department.

The CM Manager of Safety may develop and implement a program of safety, training and education for all Construction Manager's employees. This includes initial orientation, weekly safety briefs, and periodic special sessions. The CM Manager of Safety may act as a resource

for providing material and assistance to Contractor's designated Safety Representative in the performance of safety training and education.

The CM Manager of Safety may assist CDA, contractors and subcontractors in the investigation of all OSHA recordable incidents and other emergencies, obtain accident/investigation reports and forward all related copies to Chicago Department of Aviation Safety Department. Upon notification of an incident, the CM Manager of Safety will immediately notify the CDA Safety of the incident.

In the event of imminent danger situations or when necessary to enforce mandatory safety or property damage prevention requirements, the CM Manager of Safety may temporarily interrupt the work. The interruption of work activities shall be communicated to CDA Safety Department immediately. CDA Safety will direct any extended work stoppage and will determine when work may restart.

B. CONTRACTOR RESPONSIBILITIES

Contractor shall designate a Safety Representative for the project. This person shall be onsite at the project whenever work is being performed at the site or any staging area on Airport property. Dual roles (i.e. Supervisor/Safety Representative) are unacceptable. Multiple shifts will require additional safety representatives. The Safety Representative shall have project safety as his or her exclusive responsibility and not have any other responsibilities regarding this project. The Contractor must provide the Safety Representative with the authority necessary to ensure the safety of Contractor's and Subcontractor's employees and property. Among other responsibilities concerning the project safety, the Safety Representative shall provide: safety training, safety orientation, safety inspection, and conduct tool box safety meetings.

The Contractor shall provide the resume of its proposed Safety Representative to the CM Manager of Safety review and approval. If the proposed Safety Representative is not approved, the Contractor must propose another individual for approval. The Safety Representative shall, as a minimum, have completed an OSHA 30 hour "Safety and Health Standards for the Construction Industry" course or equivalent course. In addition, the Safety Representative must have completed a First aid/CPR course within the last twelve (12) months. The Safety Representative must also have a minimum of three (3) years of verifiable safety experience on construction projects developing safety programs, providing safety orientation, and conducting safety inspections.

Prior to the start of the Project, a representative from the Contractor and representatives of its Subcontractors, the Contractor's Project Manager, the City's Construction Manager and the City's Resident Engineer shall attend a mandatory Pre-Construction Safety Orientation meeting on subjects outlined by the CM Manager of Safety.

The Contractor's Safety Program must be submitted, in writing, to the CM Manager of Safety for review. The Contractor's Safety Program must, as a minimum, include:

1. REVIEW OF SAFETY PROCEDURES AND OTHER REGULATIONS

   The Safety Representative shall review procedures, regulations and industry standards applicable to the processes, equipment, materials, and procedures used at the worksite in order to evaluate whether hazards are present.

2. REVIEW OF INTERNAL RECORDS AND INFORMATION

The Safety Representative shall review internal records of accidents, injuries, occupational illnesses, near-miss accidents, and safety violations to detect relationships between job hazards and recorded mishaps.

3. REVIEW OF OUTSIDE SOURCES

The Safety Representative shall review State and Federal accident and illness statistics, highlighting areas that may uncover hazards in the organization.

4. JOB HAZARD ANALYSIS

The Safety Representative shall make an analysis of each phase of the project to determine what hazards exist in connection with the procedures, processes, materials, and equipment used to perform them. A written job hazard analysis shall be prepared for each phase prior to the work beginning. A copy of the written analysis shall be forwarded to the CM Manager of Safety.

5. CORRECTION OF JOB HAZARDS

Job hazards discovered in the course of a Job Hazard Analysis shall be referred to the appropriate supervisor for consideration. If a hazard can be corrected by a change in practices or procedures, appropriate modifications shall be instituted at the earliest possible time.

6. INSPECTION

The Contractor shall have a program of jobsite inspections. Inspections shall be conducted, with the focus to identify job hazards. Inspections shall be made at least weekly, and at least daily on FAA funded projects. Inspections records shall be retained for the duration of the project and shall be stored onsite. A copy of inspection reports shall be forwarded to the CM Manager of Safety, no later than Monday of the week following the inspection.

7. EMPLOYEE REPORTING

Contractor's employees shall be instructed to report any and all safety deficiencies, which they may observe. The Contractor may use a specified hazard reporting form.

However, employees may report hazards by any available method. Oral reports shall be recorded in writing by supervisors. Reports may be submitted anonymously, at the employee's option. The Contractor shall advise all employees that they invite reports of hazards and pledges to take no disciplinary action against any employee as a result of the employee's submission of a hazards report. Employees may submit hazard reports to their supervisor or directly to the safety committee. Supervisors are directed to route all hazard reports to the CM Manager of Safety, along with what corrective action has been taken.

8. INCIDENT INVESTIGATION

Every incident shall be investigated by a supervisor or manager, and an investigative report compiled on a specified from (a copy is available from the CM Manager of Safety). (See Exhibit V-4). Incident investigation reports shall be forwarded to the CM Manager of Safety along with recommendations for corrective action, no more than twenty-four 24) hours after the occurrence. The Contractor shall verbally notify the CM Manager of Safety

of the accident, immediately. Upon notification from the Contractor of an incident, the CM Manager of Safety will notify the CDA Safety of the incident.

With regard to hazards that are uncovered by periodic inspections, reported by employees, or discovered as result of an incident, the person receiving initial notice of the hazard, whether an inspector, manager, or safety committee member, is required to record the name of the person assigned responsibility for correction on the form on which the hazard is recorded and to forward copies of any such recommendation to all persons so named. All recommendations shall be followed up within one week. Failure on the part of the person assigned the responsibility for correction to take corrective action within the established time limit shall be reported immediately to the responsible person's supervisor, and the CM Manager of Safety.

Completed inspection documentation, employee hazard reports, and accident investigation reports shall remain open before the safety committee and shall not be filed away until all corrective measures have been completed and documented.

In the case of imminent danger, hazards that cannot be corrected safely without exposing employees to danger, supervisory personnel are instructed to evacuate all nonessential personnel from the area of the hazard until such corrective measures have been completed and the area rendered safe.

9. CONDUCT EMPLOYEE TRAINING

All Contractor employees shall be required to take part in safety and health training. Training sessions on general safety principles and practices shall be held for all Contractor employees. Individual Contractor employees are assigned for additional training that will alert them to the specific hazards that go with their particular job assignments and instructions given them in appropriate methods and procedures for the prevention of illness and injury.

10. ORIENTATION OF ALL CONTRACTOR EMPLOYEES

General safety training shall be conducted using published materials and materials developed by the Contractors safety staff.

Safety training in specific job hazards is conducted using safe practices codes developed through job hazard analyses.

Training shall be conducted by qualified safety personnel or by supervisors with extensive experience in the identification, prevention, and control of job hazards.

Contractor Employees shall receive additional training whenever they are assigned to a new task for which training has not been administered and whenever new hazards are introduced into the workplace.

Supervisors shall receive special training covering all hazards and safe practices relating to their specific area of responsibility.

In addition to training sessions conducted for current Contractor employees, sessions conducted for new and reassigned Contractor employees, and sessions conducted to address new hazards, annual refresher course shall be administered to all Contractor employees.

Individual records shall be made of all training administered to Contractor employees and shall be retained for the duration of the project. Training records shall be maintained onsite.

Copies of all written training material shall be forwarded to the CM Manager of Safety along with attendance documentation.

All Contractor employees shall attend a weekly safety training session (Tool Box Meeting). This session can be used as refresher training or a brief discussion of a new subject. Copies of notes used and attendance documentation will be forwarded to the CM Manager of Safety no later than Monday following the session. The CM Manager of Safety shall forward a copy of the Tool Box Meeting notes and attendees to CDA Safety.

11. MONTHLY SAFETY COORDINATION MEETING

To insure a steady flow of safety and health information, a mandatory monthly Safety Coordination Meeting will be held, with each Contractor's Safety Representative in attendance.

This meeting will be chaired by the CDA Safety Manager or his designee. Meeting minutes will be taken and attendance will be recorded.

12. INSURE EMPLOYEE COMPLIANCE

Code of Safe Practices

Part of each employee's regular training shall be on safe practices applicable to particular job assignments. For every job or class of jobs, a code of safe practices shall be developed through a Job Hazard Analysis. These codes are put in writing, and shall be circulated to all employees whose jobs involve the performances of tasks covered by the code, and shall be made a part of the Contractor's Safety Manual. The codes cover:

a. Engineering Controls. Employees shall be forbidden to tamper with devices installed on equipment for the purpose of preventing injury. Employees who believe that a control device is inadequate, difficult to use, improperly installed, or damaged in any way are required to report any such condition to their supervisor.

b. Procedural Controls. Employees shall be required to follow the procedures and employ the methods specified in the safe practices codes applicable to their job assignments. Employees who believe that a method or procedure is ineffective or difficult to use or who encounter problems with the use of specified methods or procedures are encouraged to report such problems to their supervisor.

c. Administrative Controls. Supervisors shall be required to insure that employees adhere to schedules and alignments that have been made to implement administrative controls. Employees shall be required to make and supervisors are required to check and maintain, whatever time records are needed to carry out administrative controls.

d. Disciplinary Procedures. The employer (Contractor) shall have a program of progressive discipline to enforce its work rules. The Contractor shall apply its disciplinary procedures with equal force to violations of safety rules as to violations of other policies and rules adopted by the organization. The Contractor's disciplinary program shall be made a part of the employer's safety program.

13. MAINTAIN RECORDS

The following records shall be compiled and maintained for the duration of the project unless otherwise required by the company or some other regulation.

- Monthly reports of occupational injury and illness
- Job hazard reports
- OSHA citations
- Results of incident investigations
- Safety inspection records and records documenting correction of reported hazards
- Job Analyses and corresponding codes of safe practices
- Individual employee training records

Contractor shall provide first-aid supplies onsite for their employees and a person trained in basic first-aid who can render immediate care when needed. The name of the designated first-aid provider and a copy of training documentation will be provided to the CM Manager of Safety. Seriously injured employees will be transported by ambulance. The Contractor shall not permit an injured employee to drive themselves to the medical facility or home, unless approved by a medical professional.

Contractor shall insure that all documents and correspondence sent to the CM Manager of Safety, be sent in such a timely fashion as to reach the CM Manager of Safety no later than the time specified.

Monthly injury/evaluation reports are to be submitted to the CM Manager of Safety no later than the 5th of each month.

C. CONTRACTOR'S SUPERVISORS RESPONSIBILITIES

1. Be responsible for planning and executing all work to comply with the Contractor's Safety Program and the Contract Specifications.

2. Be knowledgeable of loss control and public protection requirements identified in the safety specifications of the Contract Documents.

3. Require each supervisor and all workers to use the personal protective equipment in accordance with the Contractor's Safety Program, CAS, City ordinances and all State and Federal safety-related statutes, rules and regulations.

4. Participate in fact finding and resolution on all incident investigations.

5. Take immediate corrective action to abate identified unsafe conditions and practices.

6. Communicate to the Contractor's project manager and to the Contractor's Safety Representative noted safety concerns or violations that require attention.

7. Cooperate with designated safety and government representatives.

D. CONTRACTOR SAFETY REPRESENTATIVES RESPONSIBILITIES

1. Make daily job site safety inspections and take immediate abatement action to eliminate observed safety deficiencies.

2. Provide appropriate written materials for those conducting weekly “Tool Box Meetings”, review meeting reports for employee attendance and periodically attend “Tool Box Meetings” to evaluate their effectiveness.

3. Attend CAS Construction Safety and Safety Training Meetings when requested and share experiences with peers.

4. Promote total job safety among employees and visitors.

5. Oversee the investigation of all incidents involving the Contractor or subcontractor(s) to determine primary causes, contributing factors and those actions necessary to prevent a recurrence.

6. Maintain incident records and forward copies/reports to the CM Manager of Safety.

7. Follow-up on all recommendations requested by CDA, CAS, OSHA, FAA and other governing authorities, with a written response to CM Manager of Safety within twenty-four (24) hours, stating the status (date of compliance/date of expected compliance) of the recommendations.

8. Furnish all information concerning the safety of the various operations as may be requested by the CM Manager of Safety and the CDA Safety Manager.

E. CONTRACTOR’S EMPLOYEE RESPONSIBILITIES

1. Perform all work in a safe manner.

2. Accept responsibility for your own safety and report all unsafe acts or conditions to the foreman.

3. Report all incidents, injuries, and illnesses immediately upon their occurrence. Report for medical treatment as directed. A release for work authorization must be provided prior to returning to work.

4. Conduct work in accordance with CAS and established state and federal safety regulations.

5. Attend and participate in Tool Box Safety Meetings and/or demonstrations as requested.

6. Participate in accident investigation procedures as requested.

7. Be aware of the responsibility to protect yourself, follow workers, and the general public from accidental injury.

8. Protect tools or equipment provided from needless damage or loss from theft.

9. Call to the attention of the supervisor any broken or dangerous tools capable of causing injury.

V. SPECIAL REQUIREMENTS FOR AIRPORT SECURITY AND OPERATIONS

A. The requirements for Airport Security and Operations is incorporated by reference as if Article XV of the current General Conditions was repeated here word for word in this Article V.

B. In addition to the above. The Contractor shall:

a. Take extreme care when locating existing underground utilities. Contractor shall properly complete FAA Field Cable Locate Request forms see Exhibit V-1, submit them to the FAA Technical Operations office and simultaneously transmit a copy to the Construction Manager. Contractor shall designate an on-site person to monitor utility locating activities. Hand excavation and appropriate equipment shall be utilized wherever and whenever appropriate. DIGGER, JULIE, FAA and AGI shall be consulted to insure that utility locations are correctly marked.

b. In addition, prior to excavating the Contractor shall execute the procedures and requirements of the "Underground Construction Notification" form. The meetings, notifications, activities and actions required by the form will be the Contractor's responsibility to organize, coordinate, implement and execute. Work shall proceed only after the completed form has been approved by the Commissioner. See Exhibit V-2.

c. The Contractor must fill out the request for FAA Assistance form to gain access to the controlled areas described in FAA's response to form 7460-1. This form shall be submitted 5 days in advance to FAA for review and assistance. See Exhibit V-3.

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VI. GENERAL SAFETY REQUIREMENTS

The following sections describe general safety program requirements that will be met by all personnel on site. Contractor safety programs shall be defined such that they meet these requirements.

A. PERSONNEL CONDUCT

1. Under no circumstances will alcoholic beverages or controlled substances by permitted on any project. Anyone found in possession of the above will be immediately removed from the site and may not be allowed back to work on an airport project.

2. Fighting will result in all participants being removed from the site.

3. Firearms and all weapons are prohibited on site.

4. Cameras and video recorders are prohibited on site.

NOTE: Violation of any of the above rules will be grounds for the CM Manager of Safety to request CDA Safety to permanently remove a Contractor's employee from any and all CDA projects.

B. IDENTIFICATION AND REPORTING OF UNSAFE CONDITIONS

The Contractor shall immediately report to the CM Manager of Safety all accidents arising out of, or in connection with, the performance of the work on the site, which caused death, personal injury or property damage. A written report shall be submitted within 24 hours. If any claim is made by anyone against the Contractor or any Subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the CM Manager of Safety giving full details of the claim.

C. CONTRACTOR CORRECTIONS OF UNSAFE CONDITIONS

Should the CM Manager of Safety determine the Contractor is not in compliance with a CDA, Federal, State, or Local requirement, (after consultation with the Construction Manager & CDA Safety), the CM Manager of Safety shall have the authority to order cessation of the non-compliant occurrence and require immediate correction. All costs of abatement shall be borne by the Contractor deemed responsible, and no time extension or additional costs shall be granted.

The Contractor shall correct any unsafe condition existing on the project immediately upon receipt of written notice. The unsafe condition shall be corrected in accordance with applicable regulations at the Contractor's expense. The Contractor shall be responsible for all liability created from unsafe conditions, including but not limited to any legal expense, re-inspection costs, and any delay to the project to other contractors.

Each Contractor shall in a readily visible manner, identify all of his tools, and similar material either by paint color or label.

Contractors shall immediately report any occurrences of theft, vandalism, personal threats, or bodily violence to the CM Manager of Safety. Contractors shall provide any security measures they feel are necessary to protect their personnel, material, equipment, or other property.

D. HOT WORK

Hot work is defined as a process or procedure, which could result in a fire if not properly controlled. Common types of hot work in construction include but are not limited to: welding, burning, cutting, brazing, soldering, gasoline or fuel storage areas repair, grinding, spark producing or heat generating activity.

Hot work will be permitted only during normal working hours unless authorized by the CM Manager of Safety. Regardless of hours of Hot Work, CM Manager of Safety must be notified of all Hot Work activity. Permits shall be obtained by the Contractor's Safety Representative the day before work is to be accomplished. The work area shall be inspected by the Contractor's Safety Representative to verify that adequate control has been established. A copy of the permit will be posted or available within fifty (50) feet of the point of work for which a permit is issued.

The Contractor will issue all cutting/welding hot work permits to its employees and those of its Subcontractors.

1. No Hot Work may be done without a Hot Work Permit.

2. All flammable materials shall be removed from the area before a permit is issued.

3. The CM Manager of Safety may assist in determining necessary precautions to safeguard life and property.

4. Contractors shall supply their own fire extinguishers for each welder and torch.

5. Contractors shall supply their own fire watch for each Hot Work operation. The fire watch must remain at the location of each hot work operation a minimum of thirty (30) minutes after hot work is complete.

6. Shields shall be provided by the contractor to protect workers from welding flashes.

7. All areas will be kept clean of all trash.

8. Contractor shall provide flammable resistant clothing for its employees.

9. Contractors shall be responsible for the work of their Subcontractors.

10. Contractor shall provide "Flash Curtains", welding screens or other means around cutting, burning or welding work to protect surrounding Contractor employees and the general public.

11. When cylinders are transported by power vehicles, they shall be secured in a vertical position with the caps in place.

Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20 feet or by a noncombustible barrier (fire wall) at least 5 foot high having a fire resistant rating of at least one-half hour.

E. ELECTRICAL

1. RESPONSIBILITY

Each contractor performing the work has the responsibility for the proper use of all electrical tools and equipment.

2. GROUNDING

The non-current carrying metal parts of portable and/or plug connected equipment shall be grounded.

Exposed, non-current carrying metal parts of fixed electrical equipment, including motors, generators, frames and tracks of electrically operated cranes, electrically driven machinery, etc., shall be grounded.

The path from circuits, equipment, structures, and conduits or enclosures to ground shall be permanent and continuous and have ample carrying capacity to conduct safely the maximum current which may be imposed on it.

Driven rod electrodes shall have a resistance to ground not to exceed 25 ohms. Where the resistance is over 25 ohms, two or more electrodes connected in parallel shall be used.

Grounding of circuits shall be checked to ensure that the circuit between the ground and the grounded power conductor has a resistance which is low enough to permit sufficient current to flow or cause the fuse or circuit breaker to interrupt the current.

All temporary wiring shall be effectively grounded in accordance with the Chicago Electrical Code, Article VI – Grounding and all other applicable provisions of the Chicago Electrical Code.

Precautions shall be taken to make any necessary open wiring inaccessible to unauthorized personnel.

All 120 volt, 15-amp receptacle outlets on the site, which are not part of the permanent wiring of the building, shall use ground fault circuit interrupters.

3. EQUIPMENT GROUNDING CONDUCTOR PROGRAM

Ground Fault Circuit Interrupters (GFCI) are to be used at all times.

In addition, an equipment inspection program shall be established on the construction site covering all cord sets and receptacles which are not a part of the permanent wiring of the building or structure and tools which are available for use or used by employees.

This program shall comply with the following minimum requirements:

a. Each cord set, attached cap, plug and receptacle or cord set, and any equipment or tool connected by the cord and plug, except cord sets and any receptacles which are fixed and not exposed to damage, shall be visually inspected before each day's use for external defects such as, deformed or missing pins or insulation damage. Equipment found damaged or defective may not be used until repaired.

b. The following tests shall be performed on all sets and receptacles which are not a part of permanent wiring of the building or structure, and cord plug-connected equipment required to be grounded.

c. All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.

d. Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment-grounding conductor. The equipment-grounding conductor shall be connected to its terminal.

All required tests shall be performed:

a. Before first use,

b. Before equipment is returned to service following any repairs, and

c. Before equipment is used after any incident which can be reasonable suspected to have sustained damage (for example, when a cord set is run over).

Contractors shall not make available or permit the use by employees of any equipment which has not met the requirements of this section.

Tests performed as required in this section shall be recorded. This test record shall identify each receptacle cord set, and the cord and plug-connected equipment that passed the test and shall indicate the last date it was tested or interval for which it was tested. This record shall be kept by means of logs, color-coding, or other effective means. The record shall be made available on the job site for inspection.

4. ELECTRICAL TOOLS AND CORDS

Portable tools and appliances protected by an approved system of double insulation, or its equivalent, need not be grounded. Where such an approved system is employed, the equipment shall be distinctively marked.

All extension cords shall be rated for hard or extra-hard usage as defined by the National Electric Code, with three wires and a ground pin..

Electrical extension cords will not be plugged together. A cord of sufficient length must be used.

Electrical extension cords must not be placed on the ground of the floor. They must be secured at least seven (7) feet off the ground or floor.

Tools and cords in need of repair will be removed from from service immediately. The tool or cord will be rendered inoperative, either by tagging, by removing the end plug, or by locking until it is repaired and tested.

5. ELECTRICAL PANELS AND TEMPORARY WIRING

All energized panels shall be marked with its operating voltage by the installing contractor.

All energized panels shall have its live parts covered and protected from accidental contact with an appropriate solid cover. Cardboard does not meet this requirement.

All temporary wiring shall be installed in accordance with 29 CFR 1926.405 Wiring methods, components, and equipment for general use.

F. LOCKOUT/TAGOUT PROCEDURES

1. GENERAL REQUIREMENTS

When a lock/tag is placed on any energy source, that source will not be used until the lock/tag is removed in accordance with this policy.

Contractor management shall instruct all affected employees in the purpose, use, and safety significance of the Lockout/Tagout procedure.

The Lockout/Tagout devices used for compliance with this procedure shall be as follows:

Locks: Locks shall be of suitable manufacture, color-coded or otherwise identified for lockout use only.

Tags: Standard tags shall be used in all facilities

It shall be the responsibility of each contractor to maintain an adequate supply of safety locks and a written record of lock number, date issued, and name employee to whom the lock was issued.

Affected employees shall be trained in all aspects of the purpose and use of the Lockout/Tagout procedure by their Contractors. The standard Lockout/Tagout training program shall be utilized. Documentation of such training will be submitted to the CM Manager of Safety.

An energy source shall be defined as any electrical, mechanical, hydraulic, pneumatic, chemical, nuclear, thermal or other energy source that could cause injury to personnel. An energy-isolating device shall be defined as physical device which prevents the transmission or release of energy, for example, but not limited to, the following: a manually operated electrical circuit breaker, a disconnect switch, manually operated switch, a slide gate, a slip blind, line valve, block or similar devices with visible indication of the position of the device.

A circuit tester is to be used to determine that the electrical line is in fact de-energized, prior to commencing work.

2. CONTRACTOR DEVELOPED PROCEDURES

Each affected Contractor/Subcontractor shall supply the CM Manager of Safety with a copy of its Lockout/Tagout procedure prior to starting work. In addition, each Contractor/Subcontractor will provide a copy, to the CM Manager of Safety, a Lockout/Tagout checklist listing the start up and shut down procedures for its equipment and all other activities involving Lockout/Tagout.

3. SEQUENCE OF LOCKOUT PROCEDURE

When necessary, shut equipment down by the normal stopping procedure, (depress stop button, open toggle switch, valve, etc.).

Open disconnect switch, operate valve, or other energy isolating device so that the energy source(s), (electrical, mechanical, hydraulic or air, gas, steam, water pressure, etc.) must also be dissipated.

Lockout/Tagout the energy source(s) with assigned individual devices. In situations involving more than one person, all affected employees are required to place their assigned individual lock or tag on the energy-isolating device. (After assuring no personnel are exposed, operate push button or other normal operating controls to make certain the equipment will not operate. CAUTION: Return operating controls to neutral or off position after test.

Where Lockout/Tagout is not feasible (in the case of required, repetitive adjustments or production operations) the tests or work shall be accomplished under the protection of one designated individual.

If work on a piece of equipment has not been completed by the end of the shift, the supervisor in charge shall Tagout the equipment to allow the removal of locks. The oncoming shift attaches their lock(s) at which time the tag shall be removed by the oncoming supervisor.

G. CRANE SAFETY AND RIGGING

Cranes are a vital part of any construction operations. To assure that they handle the loads properly, safely, and with the greatest efficiency, the following procedures are necessary. The inspection report for the cranes and derricks must be completed in accordance with 29 CFR 1926, Subpart CC.

Contractors must follow all requirements of Subpart CC – Cranes and Derricks in Construction. The contractor must designate an Assembly/Disassembly Director in accordance with 29 CFR 1926.1404; a qualified signal person, according to 29 CFR 1926.1428; and a qualified rigger described in 29 CFR 1926.1401. Additionally, Contractors assume the role of the controlling entity as required in Subpart CC.

Fall protection must be used during assembly disassembly, inspections or other operations where fall protection hazards exist.

Contractors are responsible for implementing the requirements of 29CFR1926, Subpart CC by the specified phase-in dates.

1. MOBILE CRANE SET-UP

   The operator shall be responsible for:

   a. The proper placement of the crane in relationship to the load to be handled and the landing area so as to obtain the best rated lift capacity.

   b. Leveling the crane to within one degree of level and rechecking the level a minimum of three times during the eight-hour work shift.

   c. Assuring the outriggers are fully extended and locked in place, or if the manufacturer allows, deployment as specified in the crane's load chart.

   d. The determination of stable or unstable ground of footing: should additional floats, cribbing, timbers, or other structural members be needed, they shall be of proper design and sufficient to uniformly distribute the load.

   e. The installation and maintenance of crane swing radius protection.

   f. The proper barricading of the outriggers.

2. LOAD RATING

The weight of all auxiliary handling devices such as hoist blocks, headache balls, hooks, and rigging shall be considered as part of the total load.

Additionally, the weight of all items added to the load at the site must be determined and added to the total weight.

The Bill of Lading, provided to the operator must be used to assist in determining the load's total weight.

3. CRANE INSPECTION

All cranes shall have posted on the crane or in the cab, a valid annual inspection certificate showing a certified third party inspection. The frequency of, and criteria for inspections must be performed in accordace with 29 CFR 1926.1412.

Cranes shall be inspected:

a. After setup and prior to initial lift.
b. Before each shift.
c. After every malfunction or severe service.
d. After modifications or repairs to the crane and/or its components.
e. After repairs or adjustments.
f. When the crane has been idle for three (3) months or more.

Written Daily Inspection items to be checked:

a. All control mechanisms for maladjustment interfering with operation.
b. All control mechanisms for excessive wear of component and contamination by lubricants or other foreign matter.
c. All safety devices for malfunction.
d. Deterioration or leakage in air or hydraulic systems.
e. Crane hooks with deformation or cracks, sling and chokers for broken strands, fraying or kinking.
f. Safety latches in an operable condition on all hooks, except where otherwise specifically authorized.
g. Electrical apparatus for malfunctioning, signs of excessive wear, dirt and moisture accumulation.
h. Periodic and annual inspections shall be performed in accordance with the manufacturer's recommendations

4. RECORD KEEPING

All written records pertaining to crane inspections, daily and annual, shall be kept with the crane.

If during any safety inspection, the operator or supervisor cannot produce the required crane inspection sheets, the crane shall immediately be shut down and inspected.

5. OPERATOR QUALIFICATIONS AND OPERATION PROCEDURES

Operator shall have in his possession a current City of Chicago Crane Operator's permit and be qualified and certified in accordance with 29 CFR 1926.1427.

Cranes shall be operated by the following personnel:

- Designated operators who have been licenses by an approved agency or union and are in possession of a City of Chicago Operator's permit.

- Trainees who are under the direct supervision of the designated operator
- Inspectors certified for crane inspection.

No one other than the above personnel shall be in or on the crane during operations. Exceptions are oilers or supervisors whose duties may require their presence.

6. OPERATION PROCEDURES

Resident Engineer will notify CDA Operations when a crane is to be used Airside including height of boom and length of time crane will be in use. The crane must be equipped with a flag or mars light at its highest point according to approved FAA 7460.

The operator shall:

a. Not engage in any practice, which may divert the operator's attention while engaged in crane operation, to include not wearing walkman-type radio (entertainment) headsets.

b. Not operate the crane if physically or mentally unfit, or if taking prescription drugs that may impair vision, balance or produce other adverse affects.

c. Not respond to any signal, which is unclear or is given by anyone other than appointed signalmen. Exception: The operator shall respond to a stop signal given by anyone.

d. Not permit trainees to make initial lifts. The operator shall perform the first lift to determine lift stability, crane function, and safety in general.

e. Have final responsibility and control over the crane operations. Whenever there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle loads until safety has been assured.

f. Upon request, demonstrate the ability to determine total load weight and its relationship to the crane load charts.

7. HANDLING THE LOAD

No crane shall be loaded beyond its rated capacity, except for test purposes. When loads which are limited to structural competence rather than by stability are to be handled, the operator and supervisor shall, concurrently, determine that the weight of the load has been determined within plus or minus 5 percent before the load is lifted.

Attaching the load:

a. The load shall be attached to the hood by means of slings or other approved devices.

b. No open hooks shall be used for lifts higher than two (2) feet. Hooks used for lifts in excess of two (2) feet shall have hook safety latches or be safety wired to prevent slings from jumping off the hook.

Hoisting the load:

a. The operator shall determine that the crane is level to within one (1) degree and, where necessary, is properly cribbed and blocked.

b. The operator shall be responsible for determining that the load is properly secured and balanced before making the hoist.

c. The operator shall determine that the rope is properly seated on the drum and in the sheaves, the load line is not kinked and multiple part lines are not twisted around each other.

d. All loads must have a tagline attached to them.

During Hoisting:

a. The operator shall not suddenly accelerate or decelerate a moving load.
b. The operator shall not permit the load to contact any obstruction.
c. The operator shall not swing loads over personnel.
d. The operator shall not permit side loading of booms or dragging load. Lifts shall be limited to freely suspended loads.

Total Imposed Load:

The load on the tires, outriggers, wheels or tracks is derived from the gross weight of the crane and suspended load, i.e., the sum. However, additional loading can be exerted by shock or dynamic (movement) loads due to fast hoisting, lowering, swinging, or wind forces. This total load must be considered.

8. GROUND STABILITY

One of the critical factors of proper crane setup is a “firm supporting surface”. For maximum capacity, the crane must be level. However, to maintain a level condition, the ground surface must be adequate to support the dynamic load of a “working crane”.

Four basic elements that are to be considered:

a. Total imposed load
b. Supporting surface area
c. Pounds per square foot
d. Soil Stability

The amount of area in contact with the ground will determine the bearing pressure the crane and load exert on the soil. When it is determined that the bearing pressure exceeds soil stability, the bearing area of the crane must be increased by the use of cribbing.

Cribbing to be used must be:

a. Strong enough to withstand the weight of the crane without major deflection, thus actually increasing the bearing surface.
b. Bolted or secured together to prevent slippage and collapsing.
c. In complete contact with the soil – no voids, unsupported areas, etc.

For descriptive purposes, it is necessary to distinguish between three broad groups of soil:

a. Granular soils, including sand and gravel
b. Fine grained soils, including silts and clays
c. Organic soils, including peat

Different type soils will give different load-bearing pressure. When setting up a machine, the contractor's Assembly/Disassembly Director must be able to distinguish between the three groups of soil, the approximate mixture of each, their moisture content and their depth. The Assembly/Disassembly Director as defined in 29CFR1926.1901, must consider factors such as water tables and distance to excavations, which affect the soil's ability to withstand the pressure without collapse. The project soil analysis report may be used as an indicator of soil conditions.

Various tables are available which give the relative load-bearing capabilities of the soil types under static loads. Local building code departments are usually a good source for the tables.

9. RIGGING REQUIREMENTS

a. All rigging equipment sets shall have permanently affixed identification stating size, grade, rated capacity and manufacturer.

b. All rigging devices including slings, chains and wire rope shall have permanently affixed identification stating size, grade, rated capacity and manufacturer.

c. Rigging not in use shall be removed from the immediate work area.

d. Rigging, including slings, shall be hung on a rigging frame so that bends and kinks do not develop.

e. Wire rope slings shall be lubricated as necessary during use. Slings shall be lubricated no less than every 4 months when in storage.

f. "Shop-made" grabs, hooks, clamps or other lifting devices shall not be used unless proof-tested to 125 percent of their rated load by an approved testing agency. Approved devices shall have the capacity permanently affixed.

g. Slings, on the job, shall not be left lying on the ground or otherwise exposed to dirt and the elements.

h. Eyes in wire rope bridles, slings or bull wires shall not be formed by wire clips or knots.

i. Protruding ends of strands in splices on slings or bridles shall be covered or blunted. All rigging equipment in use shall have a safety factor of five (5).

10. SAFE RIGGING PRACTICE

a. Slings in use shall not be shortened by knots, bolts, or other makeshift devices.

b. Wire rope slings shall be padded or softeners used to protect from damage due to sharp corners.

c. Slings used in a basket hitch shall have the loads balanced to prevent slippage.

d. Loads handled by sling shall be landed on cribbing or dunnage so that slings will not be pulled from under or be crushed by the load.

e. Slings subjected to shock loading shall be immediately removed from use and destroyed.

f. When U-bolt wire rope clips are used, industry recognized standards shall be used to determine number and spacing of clips.

g. Wire rope cable clips shall be applied in accordance with recognized standards.

11. INSPECTION AND RECORD KEEPING

In addition to the inspection required elsewhere in this document, thorough inspection of slings in use shall be made on a regular basis as determined by:

a. Severity of service conditions
b. Frequency of sling use
c. Nature of lifts being made
d. Experience gained on the service life of slings used in similar use

Inspection periods shall not exceed once in twelve (12) months.

A record of inspections shall be maintained onsite.

12. INSPECTION CRITERIA

Wire rope slings shall be removed from service when:

a. There is wear or scraping of one-third the original diameter of outside individual wires.
b. Kinking, crushing, birdcaging or similar damage.
c. End attachments are cracked, deformed or worn.
d. There is exposure to temperatures in excess of 200 degrees F. (fiber-core) or 400 degrees F (non-fiber core).
e. Corrosion of the rope or end attachments occurs.

Natural and synthetic fiber rope slings shall be removed from service when:

a. Abnormal wear is observed
b. Powdered fibers are found between strands
c. Fibers are cut or broken
d. There are variations in the size or roundness of strands
e. There is discoloration or rotting
f. There is distortion of sling hardware
g. Exposed to temperatures in excess of 180 degrees F
h. There is no visible identification explaining the maximum load it can lift

Synthetic web sling shall be removed from service when:

a. Colored warning fibers are visible
b. Subjected to acid or caustic burns
c. Melting or chaffing of any part of the sling surface occurs
d. Snags, punctures, tears, or cuts are observed
e. Stitches are worn or broken
f. Fittings are distorted
g. Exposed to temperatures in excess of 180 degrees F (synthetic web) or 200 degrees F (polypropylene web).
h. There is no visible identification explaining the maximum safe workload.

13. OVERHEAD UTILITIES

Cranes working in the vicinity of overhead power lines must follow safe distance requirements established in 29 CFR 1926.1407 – 29 CFR 1926.1411 for operations and assembly/disassembly of cranes.

14. REPAIRS

The listed slings may be repaired in accordance with manufacturer's directions.

a. Synthetic slings
b. Metal mesh slings
c. Wire rope slings

Sling repairs must be performed by the manufacturer or any equivalent entity. Once repaired, each sling shall be permanently marked or tagged and a record of the repair maintained.

15. CRITICAL LIFT PROCEDURES

When two or more cranes are to lift a single load, the requirements of 1926.1432 Multiple Crane/Derrick Lifts supplemental requirements must be met.

A job hazard analysis is required for this type of work operation.

16. IN CASE OF SERIOUS EVENT

In the event the worst happens and a crane collapses, turns over, drops a load or otherwise fails, the Contractor shall follow these procedures;

a. Render emergency first aid.

b. Call the Chicago Fire Department.

c. Do not allow the crane, its components or the load to be moved unless vital to rescue operations until a complete and thorough investigation has been completed.

d. Contact the CM Manager of Safety immediately to initiate proper accident reporting and investigation procedures. The CM Manager of Safety shall contact the CDA Safety Manager.

e. Take photographs of everything including overall photographs of entire scene, detailed photos of components and anything that will explain what happened and submit complete copy to the Construction Manager.

f. Begin the interviewing process of witnesses and participants to determine what happened.

g. Assist other investigatory agencies while preserving the legal rights of all concerned parties.

h. Prepare a complete investigation and report of what happened and submit to the CM Manager of Safety. The CM Manager of Safety shall forward a complete investigation report to the designated CDA Safety Manager.

H. EXCAVATION

The purpose of this program is to establish guidelines to be followed to control excavation activities. All excavations will be done in full compliance of Subpart P, 29 CFR 1926.

Supervisors (including foreman) shall insure that all employees comply with all provisions contained in Subpart P.

All excavations shall be done under the supervision of a competent person.

All soils are to be considered type "C" so all safety provisions are to be reviewed and complied with in their entirety.

This is to include at least a 1-1/2 : 1 (34 Degrees) ratio when sloping the sides.

Any excavation greater than twenty (20) feet in depth shall have plans, which are signed and stamped by a registered professional engineer.

1. SUITABLE INSPECTION

   Once the initial excavation is completed, a competent person will inspect the excavation and complete a "Soils Analysis Checklist" and a "Daily Trenching Log". These documents will be maintained at the jobsite. No employee will enter the excavation until this documentation is complete.

2. DAILY INSPECTION

   Daily inspections of each excavation, the adjacent area, and the protective systems shall be made by a competent person for evidence of possible cave-ins, indications of failure of protective systems, hazardous atmospheres or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after each rainstorm or other hazard-increasing occurrence. All inspections will be documented on the Daily Trenching Log and a copy maintained at the jobsite.

3. LOCATING UNDERGROUND UTILITIES

   a. When trying to locate underground utilities remove the grass and ground cover in the proximity of the utilities. View with skepticism protective fences or stakes which appear to demarcate utility channels and identify the utility type because the City does not warrant their accuracy. Utilize FAA Locate Request forms, and do not rely on verbal or phone conversations with FAA Technical Operations, for the information you are seeking.

   b. Designate, dedicate and identify that person on-site who shall monitor utility locating activities, will be responsible to see to it that a utility locator, hand digging or use of a hydro excavator is used and ensure adequate lighting exists for the operation to proceed safely. Insist that a representative of the particular utility visit the site when "refreshing" a DIGGER (for earth disturbance and the location of underground utilities within Chicago city limits), Joint Utility Locating Information for Excavators (JULIE), FAA and American Geological Institute (AGI) number for the project to insure the utility location is correctly marked. Once exposed use visual markers such as fluorescent paint identify highlight their presence to others in the area.

c. The Contractor is directed to integrate the above information regarding utility identification into his program of daily safety toolbox talks. The Construction Manager will establish “report of locates” which will reference pertinent drawings and identify findings.

4. HAND TOOL EXCAVATION

Where existing underground utilities, etc., are within ten (10) feet from the exposed excavation, supervisor shall visually establish the position of the underground utilities, etc., from the observance of buried utilities surface markers, or in their absence, by hand tool excavation at sufficient intervals.

5. MACHINE EXCAVATION

When locations of all utilities, etc., have been established by surface markers, hand tool excavations, or accurate as-built drawings, and the permit does not contain a requirement for hand tool excavation only, machine excavation shall commence under close supervision.

6. UNEXPECTED UTILITIES, ETC.

During excavation, if unexpected utilities, etc., are discovered, the excavation shall stop and the CM Manager of Safety shall be notified immediately. Excavating shall not be resumed until all notifications are made according to the Chicago Department of Aviation Underground Construction Notification form and that CDA Safety and/or CM Manager of Safety has determined work can resume.

7. BARRICADING

Excavations will be properly barricaded when actual work is not being done. Barricading will be placed six feet from the edge of the excavation and will be of such strength to prevent entrance.

I. ASPHALT WORK

Due to the heavy viscous nature of asphalt, and being one of the most dangerous of all hot products, additional safety requirements are necessary for personnel working in all areas where asphalt is being handled.

Additional safety requirements include:

a. Long sleeved shirts
b. Gloves loose enough to be thrown off with a flip of the wrist
c. High top shoes 5” or more from the bottom of the sole to the ankle tops
d. Long pants, preferably without cuffs

Need to have a five (5) gallon water container, labeled “non-drinking water” onsite to be used for the possible treatment of burns.

NOTE: It is recommended that nylon or polyester clothing NOT be worn due to the tendency of these materials to melt and adhere to the skin when heated or burned. Wool is the best material to be worn with cotton being the next best.

J. PERSONAL PROTECTIVE EQUIPMENT

This policy is to establish guidelines and rules for personal protective equipment. All personnel including visitors and truck drivers shall comply with the following:

1. HEAD PROTECTION

   All Foremen, Superintendent, Field Engineers, and Management will wear white hard hats, and all craft employees will wear colored hard hats.

   Hard hats shall be worn at all times while onsite. Exceptions to this are allowed only in the following cases:

   a. Inside the main office trailers
   b. Inside enclosed vehicles
   c. While welding with the use of a welding helmet with over-the-head harness
   d. Where the head protection may otherwise constitute a hazard, e.g. upside-down position, narrow openings, etc.

   NOTE: During periods of high winds, insure a chinstrap is obtained, properly adjusted and used.

   The cradle of the hard hat shall be adjusted so that the weight of the hat is carried on it. There must be 1-1/4" (inch) clearance between the top of the hat and the head.

   No other hats shall be worn under the hard hat.

   Do not draw the headband too tight; just snug enough to prevent the hat from tilting. Special liners for winter use should be used.

   Inspect the hat daily for broken rim or crown, defective headband or cradle, etc. Replace if any defects are detected, and keep the headband clean.

   Do not cut or drill holes in the hat. The hat will be weakened and the protection ability compromised.

   Hard hats shall be worn with the bill to the front.

   All safety hats must meet ANSI Standard 289.2-1971 Class B and 289.1 Class A; and must not be altered in any way.

   The inside liner of the hard hat must be changed a minimum of once a year, or per manufacturers recommendations. The outside shell of the hard hat must be changed a minimum of every 5 years from initial usage, or in accordance with the manufacturers recommendations.

   Western style hard hats, or other novelty styles are not authorized on airport property.

2. EYE AND FACE PROTECTION

   a. Safety Glasses – All personnel shall wear a pair of ANSI approved safety glasses with accompanying side shields at all times, except where otherwise exempted. When working indoors, and no hazards exist, clear lenses (not tinted) shall be worn between sunset and sunrise, or during inclement weather.

Safety glasses need not be worn:

- Inside the main office trailers
- While wearing full-face respiratory protection: or,
- When working in dusty environments where safety goggles are needed.

b. Goggles – Are to be worn when additional protection is required. Those issued will fit over the prescription or safety glasses. This additional protection is required when conducting light grinding operation or where there is a probability of exposure to acid, caustic, chemicals, etc. Proper care of the goggles may consist of:

- Keeping goggles and lens clean.
- Never wear a pair that has been previously worn by someone else until they have been disinfected.
- Assure the head bands are in good condition.
- The lens must be securely held in place in the frame. Inspect them for scratches which may distort vision or cause eye strain.
- Do not make any repairs to or wear defective goggles

c. Face Shields – are to be worn when metal sawing, working with chemicals in a laboratory, taking samples, buffing, sanding, light grinding, table saws, etc.

NOTE: Safety glasses and/or goggles must be worn when a face shield is used.

- The headband is the only adjustable feature and should fit snug enough to hold the face shield in place and attached to the hardhat in areas where head protection is required.

- Since the shield is plastic and is easily scratched, it shall be replaced when distortion or eye strain is experienced.

- Employees wearing prescription glasses shall insure that the glasses have side shields and that the glasses and side shields meet or exceed the standards set forth in ANSI Z87.

3. FOOT AND LEG PROTECTION

Safety toe footwear is not generally required, but is highly recommended. However, safety toe boots or safety rubber boots are to be worn when required. The following are footwear requirements:

Acceptable general footwear is limited to sturdy work boots or shoes. A sturdy work boot or shoe is one that has a firm toe and leather, or leather-like uppers that will provide reasonable protection against impact, and also a hard sole that will provide reasonable protection against penetration. The following types of footwear are **not** considered to be a sturdy work boot or shoe:

a. Athletic or running shoes (including those with leather uppers and/or steel toe).
b. Moccasins, sandals
c. Spike or platform heel shoes with canvas or suede uppers
d. Shoes that expose the toes
e. Boat shoes
f. All street shoes

When cutting material with a chainsaw or chop saw, full chaps are required.

Whenever a work, which creates additional hazards for the employee's feet, i.e. using a jack hammer or a jumping jack compactor, employees will be required to wear additional foot protection such as metatarsal guards.

NOTE: Exception to this requirement is granted to secretaries, clerks and other office personnel that work outside the actual construction area. However, those personnel are not permitted into the construction area unless they are wearing the approved footwear.

4. FALL PROTECTION

Personal fall protection is required by every employee when engaged in work more than six (6) feet above a floor or ground level, unprotected by standard guardrails. Contractors must adhere to all requirements in 29 CFR 1926.500 The fall protection requirements are as follows:

a. Where personal fall protection is to be used, the employer shall be required to submit a written fall protection plan, which shall be reviewed by the CM Manager of Safety, prior to such fall protection being utilized. All submitted fall protection systems will be required to have a licensed professional engineer (PE) approve the engineering capability of the system.

b. A full body safety harness shall be accompanied with an attached shock absorbing lanyard or a retractable lanyard, which is secured to an anchorage that will support 5,000 lbs per worker attached to anchor point. Positioning devices such as "belly hooks" alone do not constitute compliance with fall protection. If the "belly hook" is used, it must be used in conjunction with a typical personal fall arrest system as determined by the competent person.

c. The harness anchor point shall be at or above the same elevation as the user's waist to minimize the fall distance.

d. Safety harnesses shall be suitable for the particular task being performed and for the hazard to which the employee is exposed.

e. The initial use of fall protection equipment must be documented and inspected by a competent person. In addition, the Contractor shall follow the manufacturer's recommendations on additional inspections of equipment.

f. Safety harnesses and safety lines shall be inspected before each use and will be replaced if found defective.

g. Contractor shall mandate that all employees in scissor lifts, manlifts, and all other human lifting equipment will be tied off at all times.

5. SHIRTS

Shirts with sleeves that cover the shoulders are required at all times. Tank tops or shirts that do not completely cover the upper body are prohibited.

6. TROUSERS

Long trousers are required at all times.

7. HOUSEKEEPING

Daily cleanup of the work area shall be required.

Good housekeeping is an integral part of our safety program. It is the responsibility of all employees, supervisors and workers alike, to maintain a clean and healthful workplace.

Waste materials and debris, such as bread and lunch cups, papers, etc., shall be deposited in the appropriate waste container and those containers are to be emptied on a routine or as needed basis. Oily rags/waste are to be deposited in closed metal containers designated for that purpose.

Oil and liquid chemicals spillage or leakage; spills, of dirt, sand and gravel, or any other form of solid waste spills; are to be cleaned up as they occur.

Field offices, tool rooms, supply facilities, etc., are to be maintained clean and orderly. Floors are to be swept and cleaned on a routine or as needed basis. Personnel having muddy, oily or snow packed footwear shall scrape or otherwise clean the shoes/boots before entering these areas.

Operating supplies are to be stored in approved storage areas. These storage areas shall be maintained in an orderly manner, labeled, and identified.

Empty containers, including drums, are to be removed promptly from the work place, disposed of properly, labeled and identified.

All original containers, and its satellite containers, need to be labeled and placed with the H.M.I.S. coding.

Personal equipment and other items are to be kept in designated areas.

Tools and equipment are to be properly stored in their designated location when not in use. Temporary storage of tools and equipment in operating areas is permitted, provided walkways and working areas are not blocked or restricted and that tripping hazards are not created.

Holes that are dug are to be backfilled immediately or protected by barricades. All excess fill is to be removed.

Temporarily installed floor gratings shall be secured in such a way as to prevent movement or tipping.

Gratings or railings that are removed shall be replaced as soon as practicable. Substantial barricades are to be erected when gratings or railings are removed.

8. SANITATION

Toilets, wash-up facilities and drinking water shall be provided by the Contractor or Subcontractor for the convenience and comfort of their employees in accordance with applicable standards. These facilities shall be secured in such a way as to prevent them from being blown over by high winds or jet blasts.

Portable toilets shall be cleaned, disinfected and re-supplied on a regular basis.

9. LIGHTING

Construction areas, ramps, runways, corridors, offices, shops and storage areas shall be lighted to not less than the minimum illumination intensities while any work is in progress as outlined by OSHA in 29CFR Part 1926.

10. NUCLEAR DENSITY MACHINE

Employees using Nuclear Density Machines must have a visible Radiation Badge. Employees not engaged in the actual testing must be at a minimum 15 feet away from the testing area. Nuclear Density Machines shall not be left unattended. Also, Proper storage and transportation shall be maintained.

11. VESTS

Clean reflective vests shall be worn at all times when airside, on jobsites and while working on roadways.

K. VEHICLE SAFETY

Unattended running vehicles Airside must have the emergency brake engaged. All company owned vehicles or vehicles used on company business are to be driven defensively; using common sense, courtesy and consideration for other motorists. It is the Contractor's responsibility to insure that all vehicles and equipment used on the project are properly maintained and fully functional.

Strict observance of CDA, City of Chicago and State of Illinois traffic laws is mandatory.

Seat belts are to be worn by the driver and all passengers at all times while the vehicle is in motion.

Contractors shall insure that all motor vehicles and equipment, except tracked equipment operating airside (except on service roads), are equipped with an amber MARS light, that shall be operating at all times. The MARS light shall be attached to the top of the vehicle and visible for 360 degrees. All construction equipment operating Airside shall have an operating amber MARS light attached to the top of its cab or shall have an orange and white checkered flag attached to its tallest point. If the checkered flag is used, the minimum size shall be 2' by 2'.

Contractor shall insure that all vehicles and equipment operating on the project shall be equipped with a back-up alarm, audible to a minimum of 200 feet.

Reflective vests shall be worn when working around heavy equipment.

L. FIRE PREVENTION AND PROTECTION

1. GENERAL PRACTICES

Fire protection must be present in accordance with all applicable standards.

No more than a one day (8 hour) supply of flammable or combustible materials shall be stored inside a building.

All portable, flammable and combustible storage containers (55 gallon drums or elevated storage tanks) shall be diked, barricaded and grounded in accordance with applicable standards.

Contractor shall only allow flammable or combustible liquids to be stored in approved metal containers or portable tanks. Containers must be marked as to its contents and placed with the H.M.I.S. coding.

> ***Approved Container means a container of not more than 5-gallon (8.9L) capacity made of metal, having a spring-closing lid and spout cover so designed that it will safely relieve internal pressure and equipped with a flashback arrester in the spout.***

The use of plastic containers for storage of flammable or combustible liquids is prohibited.

Good housekeeping practices shall be followed for minimizing the accumulation of combustible scrap and debris. This scrap and debris shall be removed daily.

Smoking is not permitted on any project considered to be Airside or in a City-owned building.

Tarpaulins and visqueen used in construction areas shall be flame retardant/resistive.

Existing fire hydrants shall not be obstructed from view or access and shall not be taken out of service without prior approval of the Chicago Fire Department. At O'Hare, submittal of the ORD Notice to Airport Users form shall be required prior to taking out of service.

Existing sprinkler systems in buildings shall not be taken out of service without prior approval of the Chicago Fire Department. At O'Hare, submittal of the ORD Notice to Airport Users form shall be required prior to taking out of service.

Open flames or barrel fires shall not be permitted at any time on airport property.

2. TEMPORARY HEATING

Portable heaters shall be equipped with an automatic shut off device that will shut the heater off if it tips over. Such heaters, having outputs above 50,000 BTU/hr., shall have either a pilot, which must be lighted prior to main burner ignition, or an electrical system ignition.

Containers of LP-Gas capacity one pound or more, must stand on a firm, substantial and level surface and shall be secured in an upright position to prevent them from being overturned.

3. STORAGE

Where combustible materials must be stored in work areas, they shall be sorted and placed into approved containers. All combustible materials shall be protected from falling sparks from welding and cutting.

Indoor storage shall not obstruct or adversely affect means of exit. No more than one day (8 hours) of compressed gasses shall be stored in any building.

At fuel or combustible material storage areas, suitable extinguishers shall be located within 50 feet of the stored material. Such areas shall also have "No Smoking" signs prominently displayed.

The Chicago Fire Department, Fire Prevention Bureau and the Chicago Department of Aviation prohibits the storage of gasoline and other CLASS I flammables in above ground tanks: CLASS II (diesel) will be permitted provided they are in compliance with the CDA Memorandum, dated May 15, 1991 and the Municipal Code of Chicago, Fire Prevention Bureau, *Section 15-24-220, Motor Fuel Dispensing and 15-24-221, Above-ground tanks.*

Sec - 15-24-220 – Motor Fuel Dispensing

All flammable liquid gauging, vending and dispensing devices used for motor vehicle fuel shall be of substantial construction, and firmly secured to a concrete foundation, which shall be so located and designed as to prevent motor vehicles from damaging such devices. Systems wherein continuous pressure is maintained, or water is used to displace liquid from storage tanks, shall not be permitted. The use of above ground storage tanks, tank cars, tank trucks or portable tanks in connection with gauging, vending and dispensing devices, shall not be permitted except for such equipment installed on tank vehicles complying with Section 15-24-1080 and tanks complying with Section 15-24-221 of this code.

Every remote fuel system shall be equipped with a fuel leak detector valve or device located as close as possible to or within the pumping unit. An impact valve or device located as close as possible to or within the pumping unit. An impact valve shall be provided at the base of each dispenser. Such devices and valves shall be listed by a testing laboratory, which has as its primary purpose the testing and evaluation of equipment and materials to meet appropriate standards.

Automatic hose nozzle valves with latch-open devices shall not be permitted. All dispensing devices shall be located so that all parts of the vehicles being served will be on private property. In no case shall the dispensing hose be longer than 16 feet for filling stations and private locations. Where dispensing equipment is used exclusively for trucks or other larger vehicles, automatic hose retrievers may be used, and shall not exceed 40 feet of hose.

Dispensing devices for motor vehicle fuel, except devices used exclusively for dispensing Class II or Class III flammable liquids within occupancy Class H3 buildings, shall not be permitted in buildings hereafter erected, altered or converted.

The dispensing of motor fuels which are Class I flammable liquids directly from tank vehicles shall be permitted only from tank vehicles complying with Section 15-24-1080 and tanks complying with Section 15-24-221 of this code. Retail sales of motor fuel to motor vehicles from tank vehicles shall not be permitted within buildings.

Sec – 15-24-221 – Above-Ground Tanks

The use of above-ground storage tanks, tank cars, tank trucks, or portable tanks in connection with vending, gauging, or dispensing of flammable liquids, other than for equipment installed on tank vehicles complying with Section 15-24-1080, shall be permitted only under the following limited circumstances:

A. The construction and installation of the tanks must satisfy each of the following conditions and restrictions:

1. ***Tanks shall be enclosed within a two-hour fire-rated assembly***
2. ***The tank assembly shall provide 110 percent secondary containment of the flammable liquid. Dikes as required in Section 15-24-170 need not be provided.***
3. ***Tanks shall be limited to a capacity of 1,000 gallons***
4. ***No more than two such above-ground tanks shall be installed or located at any one site***

5. ***The tank shall be completely surrounded by a protective guardrail which is located a minimum of two feet away from the tank***
6. ***Dispensing of the flammable liquid shall be by means of a pump which is permanently attached to the top of the enclosing assembly described in subsection (A) (1) above and which is equipped with an anti-syphon valve.***
7. ***Such tanks shall be located a minimum of ten feet away from any building or property line, except that tanks containing Class II or Class III liquids, as defined in Section 15-24-020, may be located within three feet of a fire-resistive wall without openings.***
8. ***Each tank shall bear the words "Flammable – Keep Fire Away", conspicuously on each side of the tank. The coloring of the letters shall be a color which contrasts with the color of the tank and the letters each must be a minimum of four inches high***
9. ***A lockable fill cap shall be provided***
10. ***Tanks shall be electrically grounded***
11. ***Emergency vents conforming with Section 15-24-190B shall be provided for both the primary tank and the secondary containment space.***

B. Above-ground tanks used pursuant to this section shall not be used for any retail sales

4. HAZARDOUS WASTE REMOVAL

Contractors, involved in Hazardous Waste removal must meet the requirements of OSHA 29CFR 1910.120 by attending either the 24 hr. or 40 hr. OSHA Hazardous Waste Training and carry their certification card when on site.

5. TEMPORARY BUILDINGS

All temporary sheds built inside other building(s) shall be of non-combustible materials. Corrugated sheet metal is recommended. Plastic, tarpaulins, and wood roofs are prohibited.

6. FIRE EXTINGUISHER AND HOSES

Each Contractor and Subcontractor work area shall be provided with suitable portable fire extinguishers and a fire watch where required.

Each Contractor and Subcontractor must be knowledgeable about the location and use of fire extinguishers, fire stands, and hoses. Contractors and Subcontractors must replace any discharged extinguisher immediately. Annual fire extinguisher inspections must be completed by a qualified person or agency.

The first priority in case of fire is the safety of the personnel. In the event of fire, notify the Chicago Fire Department immediately. The CDA Safety Department Representative shall be notified as soon as practicable by the most expeditious means possible.

7. INSPECTIONS

The Chicago Fire Department may be asked to inspect the project periodically to keep up to date on the route of access to the building for their equipment, availability of water, and access for job personnel. Reports will be provided of inspection results.

M. LADDERS

1. GENERAL

   a. Manufactured ladders must be rated for industrial or heavy duty work.

   b. Job-made ladders must be constructed to conform with established federal and state standards.

   c. Broken or damaged ladders must not be used. Repair or destroy them immediately. Ladders to be repaired must be tagged and removed from the area.

   d. Wooden ladders shall not be painted so as to obscure a defect in the wood; only a clear, non-conductive finish shall be used.

   e. All ladders shall be manufactured from non-electrically conductive materials.

   f. Ladders shall not be placed in front of doors opening toward the ladder, unless the door is open, locked or guarded.

   g. Only one person shall work from a ladder at one time. If two persons are required, a second ladder shall be used.

   h. Ladders shall not be used as scaffold platforms.

   i. Boxes, chairs, etc., shall not be used as ladders.

   j. When ascending or descending ladders, employees shall have both hands free and shall face the ladder, unsecured ladders shall not be left unattended.

   k. Areas around the top and base of ladders must be free of tripping hazards such as loose materials, debris, cords, hoses, etc.

   l. Employees shall be tied off when using either straight ladders or stepladders and when reaching to the side of the ladder at heights greater than six (6) feet.

2. STRAIGHT LADDERS

   a. All straight ladders shall be equipped with non-skid safety feet. The base of the ladder must be set back a safe distance from the vertical unit, approximately one-forth of the length of the ladder. (4 to 1 ratio shall be used).

   b. All straight ladders must be tied off at the top or otherwise secured to prevent movement. A second employee must hold the bottom of the ladder while the top is being secured.

   c. Ladders used for access to a floor, roof or platform must extend at least 36” above the point of bearing.

   d. Splicing ladders together is prohibited.

   e. Never use a ladder against a vertical pipe unless the ladder is equipped with a specially designed web strap.

   f. Do not place the ladder against movable objects.

g. Straight ladders shall not be climbed beyond the third step from the top.

3. STEP LADDERS

a. The top two steps shall not be used.

b. The legs shall be fully spread and the spreading bars locked firmly in place.

c. Only one person may use a stepladder at a time.

d. The use of a stepladder as a straight ladder is prohibited.

N. SCAFFOLDS

All scaffolds shall be erected and used under the supervision of a competent person and shall adhere to all the requirements of 29 CFR 1926.450. With exception to fall protection where fall hazards exceed six (6) feet, fall protection shall be utilized.

The Contractor shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffolding being used and to understand the procedures to control or minimize those hazards.

All scaffolds shall be erected and maintained to conform with established standards and manufacturer requirements. Supported scaffold systems must include screw jacks and mudsills.

Before assembling and dismantling the scaffold, the Contractor must conduct a Job Hazard Analysis (JHA), specifically related to fall protection. The JHA must be submitted to the CM Manager of Safety for review and comment, and only after review by the CM Manager of Safety, may the Contractor work without fall protection, if fall protection provides a greater risk.

Scaffolds shall be constructed with sound materials, securely fastened and be capable of supporting at least four (4) times the combined weight of the workers and tools/material which may be placed on them.

Scaffold components produced by different manufacturers shall not be intermixed.

Guardrails, midrails and toe boards shall be installed on all open sides of the scaffold. Guardrails, midrails and toe boards should be constructed from components supplied by the manufacturer. Where this is not possible, sound 2 X 4 inch limber must be used for the guardrails and 1 X 4 inch lumber for the toe boards.

Scaffold planks shall not be less than 2 X 10 inch. They must be cleaned and secured to prevent movement, and shall not extend beyond the outer supports more than 12 inches nor less than 6 inches.

All scaffolds shall be fully planked. No employee shall work from a single plank.

Scaffold planks shall be visually inspected prior to use and if defective, they must be destroyed immediately.

Access ladders shall be provided for each scaffold. Climbing off the end frames or using cross braces for access is not allowed.

Scaffolds shall be secured to the building or structure at intervals which do not exceed 30 feet horizontally and 20 feet vertically.

Overhead protection is required if employees are working on scaffolds and are exposed to overhead hazards. Such protection must be at least 2 X 10 inch planks or the equivalent.

Contractors competent scaffolding person will post a scaffolding sign placard system to provide awareness of possible hazards near or on a scaffold.

The scaffolding sign placard system implemented by the competent person should include a DAILY inspection with that days competent persons initials, time of day (a.m./p.m.) and repairs or modifications made to the scaffold since the initial erection.

The placement of the placard on the scaffold should have a designated position for all scaffolds. All placards are to be placed at eye level, approximately at a height of 5 feet, adjacent to the access ladders for immediate employee hazard recognition.

Green placard = Scaffold Safe for Use

Yellow placard = Scaffold Under Construction, Fall Protection Required

Red placard = Scaffold Unsafe, Do Not Use

Scaffolds or work platforms shall not be altered by unauthorized personnel.

Contractors are required to develop a written plan if suspended scaffolds are used. The written plan must address all requirements in 29 CFR 1926.450. Additionally, a JHA must be developed and shared with personnel working on the suspended scaffold.

The perimeter around the scaffold shall be barricaded.

1. ROLLING SCAFFOLDS

    a. No one is permitted to ride rolling scaffolds while they are being moved.

    b. Rolling scaffolds shall only be used on level and suitable surfaces. Use leveling jacks, where required, or equivalent.

    c. The height shall not exceed four times the minimum base dimension.

    d. The work platform shall be fully planked. Planks must be cleated, or otherwise secured, to prevent movement.

    e. The scaffold shall have the casters or wheels in the locked position when the scaffold is not being moved.

    f. Obtain assistance when moving rolling scaffolds and assure the travel route is clear of holes and overhead obstructions.

    g. Re-inspect the rolling scaffold if moved more than 200’ in an eight (8) hour work shift.

    h. Secure or remove all loose tools, materials and equipment before moving the scaffold.

2. INSPECTION OF SCAFFOLDS

a. All scaffolds shall be inspected by a competent person after being erected and prior to use.

b. All scaffolds shall be inspected by a competent person each day prior to being used.

c. All such inspection shall be documented, including re-inspection when applicable.

O. FLOOR, ROOF OR WALL OPENINGS

Any floor or wall opening, through which a worker, equipment, or material might fall, shall be covered with material of sufficient strength to support any load placed upon it, or guarded on all sides with standard guardrails and toe boards.

If a cover is utilized, it shall be secured to prevent accidental removal or displacement.

The floor covering must be able to support twice the intended load.

A sign shall be posted on the protective covering which states “Floor (Roof) Opening. DO NOT REMOVE.

All temporary protection shall be left in place until permanent protection has been installed or the hazard has been eliminated.

Ladder openings in floors and platforms shall be guarded by standard guardrails and toe boards on all sides.

When it is necessary to work inside the barricade around a floor opening, appropriate personal fall protection shall be worn.

P. PORTABLE HAND AND POWER TOOLS (ELECTRIC AND PNEUMATIC)

1. HAND TOOLS

a. Employees shall use only those tools, which are in good condition. The tool used shall be for the purpose for which it was designed. When proper and safe tools are not available for immediate work, contact your supervisor.

b. All tools shall be inspected at regular intervals and tools which develop defects while in use shall be removed from service, tagged, and not used again until deemed to be in safe working condition.

c. Impact tools with mushroomed heads, such as chisels, drills, hammers and wedges shall not be used until they have been reconditioned.

d. Hammers, axes, shovels and similar tools shall not be used if the handles are loose, cracked or splintered. The handles shall be replaced and never repaired with tape or wire.

e. Open-end and adjustable wrenches with sprung or damaged jaws shall not be used. Pipe wrenches with dull teeth shall not be used. Shims shall not be used to make a wrench fit.

f. Pipe or other extensions shall not be used on a wrench handle for added leverage, unless the wrench is specifically designed for such use.

g. Hammers with metal handles, screwdrivers or knives with metal continuing through the handle, metal rulers, metal tape lines, or tape lines containing metal wires shall not be used on or near energized electrical circuits or equipment. Insulation on hand tools shall not be relied on to protect users from an electrical shock.

h. Tools shall not be left lying around where they may cause someone to trip or stumble.

i. Tools shall not be thrown from place to place or from person to person.

j. Appropriate buckets, etc., firmly attached to hand lines shall be used to raise or lower tools from one elevation to another.

k. Tools shall be stored on appropriate tool boards, boxes, racks or compartments when not in use.

l. When working on or above grating, a suitable covering shall be used to cover the grating to prevent tools, or parts from dropping to a lower level where personnel and equipment are present. The lower danger area should be barricaded or guarded with appropriate warning signs posted.

2. POWER TOOLS (ELECTRIC AND PNEUMATIC)

a. No repairs or adjustment shall be made on a power tool (electric or pneumatic) unless the tool is disconnected from its power source. If it is necessary to be out of sight of the plug or connection while repairs are being made, attach a tog to the plug or connection.

b. Never operate a power impact tool unless the retainer ring and/or pin is in place and the head is against a solid object.

c. Damaged or defective tools must be removed from service immediately.

d. Power tools shall be hoisted or lowered by a hand line, bucket, etc., never by the cord or hose.

e. Cords and hoses must be kept out of walkways and off stairs and ladders. They must also be secured with care to prevent them from being damaged by other equipment or materials.

f. Safety switches shall not be bypassed or made inoperable.

g. All proper guards must be in place at all times.

3. ELECTRIC TOOLS

a. The non-current carrying metal parts of electric tools such as drills, saws and grinders shall be effectively grounded when connected to a power source, unless:

b. The tool is an approved double-insulted type, or

c. The tool is connected to the power supply by means of an isolating transformer or other isolated power supply, such as a 24-volt DC system.

d. All power tools shall be examined prior to use to insure general serviceability and the presence of all applicable safety devices. The electric cord end electric components shall be given an especially thorough examination.

e. Electric tools shall not be used where there is a hazard of flammable vapors, gases or dusts. Assure the ground prong is present.

4. PNEUMATIC TOOLS

a. Pneumatic tools shall only be operated by competent persons who have been trained in their use. Documentation of training shall be available onsite.

b. Pneumatic tools shall be secured to the hose by some positive means; also, each hose connection must be provided a safety-retaining clip.

c. These tools shall never be pointed at another person.

d. Compressed air shall not be used for cleaning purposes.

e. Compressed air shall not be used to blow dust or dirt from clothing.

f. Assure all appropriate personnel protective clothing is worn, including hearing protection, when necessary.

g. Prior to making adjustments or changing air tools, unless equipped with quick-change connectors, the air shall be shut off at the air supply valve ahead of the hose. The hose shall be bled at the tool before breaking the connection.

h. Metal-reinforced hose shall not be used near energized equipment. When this type hose must be used, proper clearances shall be maintained.

5. GRINDERS

a. Stationary grinders shall be mounted securely on substantial floors, benches or foundations to prevent excessive vibration or tipping.

b. Enclosures for grind wheels are required.

c. Tool rests shall be kept 1/8” (inch) from the wheel and gap distance shall be adjusted for wheel wear.

d. The abrasive wheel, disc, etc., shall meet or exceed the maximum RPM rating of the grinder.

e. Immediately before mounting, all wheels shall be closely inspected by the user to assure the wheels have not been damaged. Any wheel that shows damage or has been dropped on a hard surface shall not be used.

f. Guards are required on all portable grinders when the diameter of the wheel exceeds 2” (inches) in diameter.

g. The abrasive wheel and accessories shall meet or exceed the maximum RPM of the grinder.

h. The abrasive wheel shall be closely inspected for damage prior to mounting on the grinder.

i. Abrasive grinding wheels shall not be dropped into a gang box, onto concrete, or shall not have other materials or tools dropped on them.

j. When a grinder is first used at the beginning of the job, it should be brought up to operating speed with the wheel oriented so that any breakage will be deflected away from the user and other personnel.

6. MACHINE GUARDS AND SAFETY APPLIANCES

a. Machine guards on components such as flywheels, belts and pulley drives or pump couplings shall not be removed unless the equipment is de-energized and tagged and locked out.

b. If guards are removed to make repairs, the guards shall be replaced before the machinery is put back in operation.

c. Only properly trained and authorized personnel shall make any adjustments to safety appliances such as relief valves, vents or overspeed trips.

d. Safety appliances such as relief valves, vents or overspeed trips, etc., shall not be bypassed or made inoperative without express concurrence of management and the project safety representative.

Q. MATERIAL HANDLING AND STORAGE

1. POWERED INDUSTRIAL TRUCKS (FORKLIFTS)

When the use of a forklift is called for, the operator of the forklift must be certified in its use.

OSHA regulations (1926.602d) states: “the employer shall ensure that each powered industrial truck (forklift) operator is competent to operate a powered industrial truck (forklift) safely, as demonstrated by the successful completion of the training”.

The operator must have his certification card, which signifies successful completion of this training, on his person whenever operating the forklift.

2. STORAGE

All material must be properly stacked and secured to prevent sliding, falling or collapse. Aisles, stairs and passageways must be kept clear to provide for the safe movement of employees and equipment and to provide access in emergencies.

Pipe, conduit and bar stock shall be stored in racks or stacked and blocked to prevent movement.

The quantity of materials stored on scaffolds, platforms or walkways must not exceed that required for one day’s operations or the rated capacity of the scaffold or platform

Protruding nails must be bent or removed when forms or materials are stripped or uncrated.

Materials shall not be stored in such a manner that they block access to fire exits, electrical panels or emergency equipment.

3. MANUAL LIFTING AND CARRYING

When lifting heavy or awkward objects, the employee shall obtain the assistance from another employee or use power-lifting equipment.

When two or more persons are carrying an object, each employee, if possible, shall face the direction in which the object is being carried.

When two or more employees are lifting or pulling together, one person shall give the signals for the group. Never carry an object alone that prevents your seeing the route of travel.

When lifting an object, crouch or squat with your feet close to the object to be lifted, secure good footing with feet apart, take a firm grip with the palms, bend the knees, keep the back straight with the chin tucked in, lift by using the leg and thigh muscles, and hold the load close to your body.

4. PAINTING/CHEMICAL USE

The Contractor shall take appropriate measures to minimize the spread of airborne paint particles, i.e., hand tarps/visqueen, cover other equipment/material and cease outside spraying during windy conditions.

The Contractor shall provide adequate ventilation in enclosed areas.

Employees, whether applying or stripping paint, shall use all required personal protective equipment – when in doubt contact your supervisor.

Consult the Material Safety Data Sheet (MSDS) for all precautionary measures.

No spray painting will be permitted in the presence of open flames (acetylene torches, gas burners, welding operations, heaters, furnaces, boilers, etc.) due to the possibility of igniting flammable materials contained in the paint products.

Please refer to VII (B) for detailed information on the respiratory safety requirements.

R. BARRICADING / TRAFFIC CONTROL

1. BARRICADES

Barricades shall be maintained around excavations, confined spaces or other hazardous areas at all times.

Barricades may be 2” X 4” planks attached to upright stations or yellow and black ribbon. If 2” X 4” planks are used, they shall consist of handrails and midrails. Handrails shall be 42” from the floor or ground and the midrail shall be placed 24” from the floor or ground.

If the yellow and black “caution” tape is used, it shall be the plastic-coated, woven nylon type. Plastic or polyethylene type shall not be used.

Snow fence shall be used in lieu of barricade tape at construction areas where pedestrian traffic is present or which can cause caution tape to be insufficient.

2. TRAFFIC CONTROL

When working in or near a public road or street, barricades shall comply with IDOT Standards/Specifications for Traffic Control. This shall include, but not be limited to, spacing, color-coding, size and lighting.

All barricaded areas shall be inspected twice per week, once during daylight hours and once during the hours of darkness. The inspection form shall be completed after each inspection and forwarded to the CM Manager of Safety.

When flag persons are used, they shall have been trained and certified a flag person by a Laborer's Union or some other certifying agency. The flag person shall wear an appropriate traffic vest, PPE and be equipped with a traffic paddle or flag during daytime activity and an illuminated wand for night work. Any employee functioning as a flag person shall have in their possession a current certification card. Employees not trained and certified may not perform flagging duties.

Reflective vests shall be worn by all personnel working on Roadways, Taxiways, Runways and Projects where employees are in the area of vehicular traffic and/or airport Operations.

A daily traffic log must be completed and signed off. These records must remain on file for review.

S. SAFE USE OF EQUIPMENT/GENERAL EQUIPMENT

1. Any Contractor employee operating a piece of equipment that the employee sits in will be required to wear a functional seatbelt, unless the equipment lacks ROPS (Rollover Protection System) or is designed for standup operation.

2. Safety glasses and reflective vests shall be worn while operating equipment. Hardhats are required when outside a protective cab.

3. Functional fire extinguishers will be secured and located in all contractor equipment.

4. Daily equipment inspection sheets shall be completed by the operator and remain in the cab, available for review upon request.

5. Functional amber MARS lights must be activated at all times while equipment is operating, (Exception: Tracked Equipment).

6. Functional back up and movement alarms must be operating on all moving equipment.

7. All Contractor's operators must be trained on the proper operation of the piece of equipment they are using, and certified or licensed where required.

8. All vertical or articulating machinery that is used to lift workers or equipment must be equipped with a vertical and horizontal motion detection signal.

9. Impaired visibility caused by the equipment or the location of the equipment shall require the use of a spotter for the movement of equipment or vehicles on the construction site.

T. GENERAL SAFETY COMMUNICATION

Regardless of the method of communication, all Contractor's supervisors and/or foreman must be able to verbally communicate with their employees. If there are employees on the jobsite that choose to communicate with a language other than English, then the Contractor shall, at all times work is conducted, have supervisory personnel on the jobsite that is proficient in the chosen language of the employees and English. The ability to verbally communicate with all employees is paramount to safety training and hazard abatement.

U. STEEL ERECTION

Safety Standards are governed by OSHA, Section 1926R. Effective January 18, 2002, Subpart R was revised. Contractors involved with steel erection are required to comply with all requirements of Subpart R. The key provisions of the revised steel erection standard include:

1. The site layout and construction sequence
2. Site-specific erection plan
3. Hoisting and rigging
4. Structural steel assembly
5. Column anchorage
6. Beams and columns
7. Open web steel joists
8. Systems-engineered metal buildings
9. Falling object protection
10. Fall protection (The airport 6' fall protection rule shall supersede the 1926R fall protection requirements.)
11. Training

This subpart addresses hazards associated with, but not limited to hoisting, landing and placing decking; column stability; double connections; working under loads; landing and placing steel joists and falls to lower levels. These provisions are specifically addressed to ALL EMPLOYEES exposed to any of the conditions aforementioned and is NOT specific to the ironworkers trade only.

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VII. HEALTH PRECAUTIONS

A. HAZARD COMMUNICATION

1. DEFINITIONS

Article: A manufactured item which is formed to a specific shape or design during manufacturer has end use functions dependent in whole or in part upon the shape or design, and which does not result in exposure to a hazardous chemical under normal conditions of use.

Chemical: Any element, compound or mixture of elements and/or compounds, excluding articles, food, drugs or cosmetics intended for personal consumption, wood, wood products, tobacco and tobacco products.

Name: Scientific designation of a chemical in accordance with the nomenclature system of the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS).

2. POLICY

This program is designed to insure that the Contractor provides information to his employees at all levels regarding chemical projects to which they are exposed. It will be accomplished by the following:

Contractors shall maintain a list of all hazardous chemical products used and stored onsite. A copy of all MSDS shall be submitted to the Contractor safety representative prior to being brought onto the site. A master index will be located in the CM Manager of Safety's and the Contractor's office.

Appropriate labeling on containers of all chemical materials used. All labeling shall conform to the National Fire Protection Association (NFPA) systems.

Making available Material Safety Data Sheets (MSDS's) for all chemical products used at the airport.

Employee training to recognize and interpret labels, warnings, color-coding, signs, etc., that are affixed to containers so that they can properly protect themselves against potential hazards.

Employee training to understand the elements of the Material Safety Data Sheet and to recognize possible risks to health and physical harm.

This written program shall be made available, upon request to employees, their designated representative(s) and all City of Chicago, State and Federal officials who have proper authority.

3. CHEMICAL PRODUCT INVENTORY LISTS AND MATERIAL SAFETY DATA SHEETS

A list of all hazardous chemicals and a copy of MSDS's used shall be maintained in the CM Manager of Safety's office.

Each Contractor shall be required to maintain a copy of a chemical inventory and a copy of all MSDS's for chemicals used by their employees or employees of their subcontractors. These copies will be maintained onsite.

4. LABELS

Hazardous chemicals received onsite shall be properly labeled by the manufacturer/supplier. If labels are not provided, the supplier shall be contacted to get the specific labels. Containers will not be received onsite without labels. These labels must provide the following information:

a. Identity of the chemical projects or substances in the container
b. Hazard Warnings
c. Name and address of the manufacturer or other responsible party
d. The labels must not be removed and must be replaced if illegible

All containers of hazardous chemical projects, including laboratory bottles, solvent cans and dispensers must be labeled and must be of proper construction in order to contain the chemical.

5. EMPLOYEE TRAINING AND INFORMATION

Contractors shall provide to employees whose work includes the use of hazardous chemicals training in the handling of chemical products. There will be periodic reviews of the training program.

The training program will provide instruction in the following:

a. The location and availability of the MSDS sheets
b. Explanation of the MSDS data and manufacturer's label
c. Methods and observations to detect the presence, or release, of hazardous chemicals in the work area.
d. Protection measures for employees. This includes safe work practices and available protective equipment such as face and eye protection, outerwear, gloves and respirators.

6. INFORMING OTHER CONTRACTORS

Information concerning the location and hazards of hazardous chemicals present in the work area must be made available to other contractors. Copies of the appropriate Material Safety Data Sheets shall be given to the Contractor's supervisory personnel by the Contractors Safety Representative when it is apparent that contractor employees are working in an area where hazardous chemicals are used.

B. RESPIRATORY PROTECTION

1. RESPONSIBILITY

The Contractor shall be responsible for administration of an effective respiratory protection program. They may delegate the authority for this assignment to the safety specialist. However, it remains the Contractor's responsibility to assume full compliance with all sections of this program.

2. HAZARD ASSESSMENT

Proper written assessment of the hazard is the first important step to protection. This requires thorough knowledge of the process, related equipment, raw materials and end products and by-products which can possibly create an exposure hazard. Air samples must be taken with proper sampling instruments during all conditions of operation to assess the atmosphere for oxygen content in concentration levels of particular and/or gaseous contaminates. The sampling device and the type and frequency of sampling will be dictated by the exposure and operating conditions.

3. HAZARD CONTROL

As operating conditions within an active construction site make many engineering controls difficult, if not impossible to use, considerable emphasis must be given to providing proper and adequate personal protective equipment. However, consideration should be given to using less toxic materials in the process, providing suitable exhaust ventilation or isolation.

4. SELECTION

Since there are many types of respiratory protective devices, it is imperative that they be selected with utmost care to insure that the proper protection is afforded and that personnel are thoroughly trained in their use and limitations. Only equipment approved by the National Institute for Occupational Safety & Health (NIOSH) will be used.

Respiratory protective devices vary in design, application and protective capability. The user must, therefore, assess the inhalation hazard and understand the specific use and limitations of available equipment to assure proper selection. Respiratory protective devices fall into three classes; air purifying, supplied air and self-contained breathing apparatus.

5. TRAINING

For safe use of any respiratory protective device, it is essential that the user be properly instructed in the selection, use and maintenance. Both supervisors and workers shall be so instructed by competent persons. Minimum training shall include the following:

Instruction in the nature of the hazard, whether acute and/or chronic, and an honest appraisal of what might happen if the proper device is not used.

Explanation of why a more positive control is not immediately feasible. This shall include recognition that every reasonable effort is being made to reduce or eliminate the need for respiratory protection.

A discussion of the devices, capabilities and limitations.

a. Instruction and training in actual use (especially a respiratory protective device for emergency use) with close and frequent supervision to assure that it continues to be properly used. Classroom and field training to recognize and cope with an emergency situation.

b. Training shall provide the employees an opportunity to handle the device, have it fitted properly, test its face piece to face seal, wear it in normal air for long periods and finally, to wear it in a test atmosphere. Respiratory protective devices shall never be worn when a satisfactory face seal cannot be obtained. There are many

conditions that may prevent a satisfactory face seal from being worn, such as excessively long side burns, beard, temples on glasses, or an unusually structured face.

All training will be documented and that documentation maintained onsite.

6. INSPECTION, MAINTENANCE AND REPAIR

Proper inspection, maintenance and repair of respiratory protective equipment is mandatory to assure success of any respiratory protection program. The precise nature of the program will vary widely depending on the type of equipment involved. The goal is to maintain the equipment in the conditions providing the same effectiveness it had when manufactured.

All equipment must be inspected periodically before and after use. For equipment used only in emergencies, the period between inspections should be no more than one month. A record shall be kept of all inspections by date with the results tabulated. The manufacturer's recommendations shall be followed precisely.

All respiratory protective equipment shall be cleaned and disinfected after each use. Other maintenance includes replacement of disposal elements, such as filters and cartridges whenever such replacement is necessary. Following the cleaning of equipment, it shall be placed in a plastic bag to maintain it free of contamination.

Replacement of other than disposable parts and any repair shall be done only be personnel with adequate training to insure that the equipment is functionally sound after the work is complete.

7. MEDICAL SURVEILLANCE

Workers will not be assigned to any operation requiring respiratory protection until a physician has determined that they are physically and psychologically capable of performing the work using the respiratory protective equipment. Documentation of the physical exams will be maintained onsite.

C. HEAT STRESS

1. DEFINITIONS

Heat stress - A combination of environmental conditions, work demands and clothing requirements that tend to increase body temperature. Heat stress can diminish work performance and adversely affect worker health and safety.

Note: Environment conditions include high temperature/ high humidity and heat from hot surfaces.

Heavy Work - Heavy lifting, pushing or pulling as in pick and shovel work or climbing ladders and stairs, turning valves and lifting or moving heavy objects.

Moderate Work - Sitting with heavy arm or leg movement, standing with some walking about or walking about with moderate lifting/pushing and descending stairs/ladders, installing insulation or manual valve alignment (ease).

2. RESPONSIBILITY

Supervisor shall:

- Plan work tasks to reduce heat stress potential
- Emphasize the safe work practices in the Heat Stress Policy
- Insure the use of the "buddy system" and monitoring in areas where heat exposure is severe due to protective clothing requirements.

Employees shall:

a. Inform their supervisor of any medication which may preclude the employee from working in a heat stress area. These medications include:
   - Diuretics
   - Vasodilators
   - Central nervous system inhibitors
   - Antichlorinergic medications
   - Antihistamines
   - Muscle relaxants
   - Tranquilizers
   - Sedatives
   - Amphetamines
   - Atropine

b. Inform their supervisor of recent sunburns or any illness involving fever, vomiting or diarrhea as these conditions may dehydrate a person.

c. Immediately notify the person in charge and leave the area when feeling discomfort from heat stress, e.g.,
   - Dizziness
   - Headache
   - Nausea
   - Fainting

   Note: When working outside, rest in the shade

d. Follow these directions to reduce the potential of heat stress problems.
   - Increase fluid intake
   - Do not skip meals
   - Avoid alcohol use

3. DESCRIPTION OF HEAT STRESS

Under heat stress conditions, the body produces heat faster than it can be shed to the surrounding environment or when the body absorbs heat from the surrounding environment. The body must maintain itself between 98 degrees – 100 degrees F. To do this, the body increases blood flow to take heat from the muscles to the skin and increase perspiration to cool by evaporation.

4. RECOGNITION AND TREATMENT OF HEAT ILLNESSES

ILLNESS	SYMPTOMS	TREATMENT
Heat Stroke	Dry skin, usually red; mottled of cyanotic; confusion, loss of consciousness; convulsions, fatal if treatment is delayed.	Immediate and rapid cooling by immersion in chilled water or wrapping in a wet sheet.
Heat Rash	Red rash with blister-like bumps; prickling sensation during heat exposure.	Intermittent relief from heat, maintain dry skin, prevent secondary infection.
Heat Cramps	Painful spasms of muscles used during work; onset during or after work hours.	Drink more water, eat salty foods.
Heat Syncope	Fainting while standing, erect and immobile in heat.	Remove to cooler area; rest in recumbent position; drink water.
Heat Exhaustion	Fatigue; nausea, headache, giddiness, skin clammy and moist; may faint with rapid pulse and low blood pressure.	Remove to cooler area. Rest in reclined position; administer fluids by mouth.

5. TRAINING

Sufficient annual training shall be provided to cover heat stress problems employees could experience. The training should include:

- Recognition and treatment of heat stress
- Safe work practices
- Instrumentation for heat stress monitoring
- Physiological heat exposure limits/WBGT
- Documentation of training will be maintained onsite

D. CONFINED SPACE ENTRY

All confined space work shall be done under the supervision of a competent person.

1. INTRODUCTION

The Contractor shall have the responsibility for recognizing areas considered to be a confined space and for notifying employees assigned to such locations. The Contractor shall be responsible for providing equipment and special instructions for the workmen, such as ventilating units, respirators, safety belts, lifelines, all atmospheric testing and testing equipment, and all conformance to all applicable OSHA standards.

The “buddy” system shall be used and an observer shall tend all workmen in a confined space. Rescue procedures shall be agreed upon beforehand. The Contractor shall submit a complete Confined Space Entry Program to the CM Manager of Safety prior to starting

work. The Contractor shall also be responsible for notifying the Chicago Fire Department prior to beginning work in a confined space. Further, Job Hazard Analysis documentation and discussion related to specific confined space operations shall be submitted to the CM Manager of Safety.

The hazards encountered and associated with entering and working in confined spaces are capable of causing bodily injury, illness, and death to the worker. Accidents occur because of failure to recognize that a confined space is a potential hazard. Hazard potential is magnified when employee workspaces, which previously have been free of contamination, are for various reasons subject to conditions which alter their normal atmospheres. An employee's awareness of conditions in and around his or her work areas must be instilled in those working in confined spaces. An understanding of the nature of any problem shall be communicated to affected employees by their employers, so that an awareness of entry into the space will be achieved.

2. DEFINITION

A confined space is defined as any space having limited entry or exit (egress) which may be subject to the development of any oxygen-deficient atmosphere or the accumulation of toxic or flammable contaminants. Confined spaces may include, but are not limited to the following structures or enclosures: Silos, boilers, vaults, storage tanks, plating and degreasing tanks, process vessels, bins, sewers, manholes, catch basin, pipelines, underground utility vaults and ducts. Also included are open top spaces such as pits, tubs, tunnels, press pits and underground shafts or other excavations which may be poorly ventilated and permit the presence of a hazardous atmosphere.

3. HAZARDS

A variety of hazards may be associated with a confined or enclosed space, and knowledge of them is essential when evaluating the condition of such spaces. A list of these hazards include:

a. An atmosphere deficient in oxygen due to its displacement by other gases or vapors. An oxygen-deficient atmosphere is one, which contains less than 19.5% oxygen by volume. An oxygen-enriched atmosphere exceeds 23.5% oxygen.

b. A Lower Explosive Limit (LEL) that exceeds 10%.

c. Toxic, flammable, or explosive dusts, gases, vapors, fumes, smoke or mists.

d. Electrical equipment such as tools or lighting which may present the possibility of electrical shock or serve as a source of ignition.

e. Exposure to extremes in temperature.

f. Limited access opening which may hinder the entry of rescue personnel.

g. The operation of tumblers, mixing blades, crushes, agitators, pumps, rams or conveyors.

h. Insufficient illumination.

i. Obstacles of distance between the work location and point of exit.

j. Hydraulic oils, gases or other fluids contained within pressurized lines.

k. Improper, inadequate, or poorly maintained respiratory protective or rescue equipment.

l. Absence of an attendant stationed outside of the entrance.

m. Lack of ability to communicate between inside workers and outside personnel.

4. PROCEDURES FOR ENTRY

The following are conditions for entry into all confined spaces:

Break or block supply lines or lock out valves on those supply lines servicing the vessel or space. The flow of material into confined spaces while employees are working there must be eliminated. Caution must be exercised while breaking supply lines to prevent exposure to hazardous material they may contain.

Lock and tag out energy sources to moving parts inside the space such as agitators, converters, or mixing blades.

Before entry, the confined space shall be purged by leaving access doors or hatches open. Natural ventilation is then possible, or mechanical ventilation may be provided by a portable blower. When portable blowers are used, intakes to this air-moving equipment must be positioned so that only clean air is introduced into the confined space. Any accumulation of material which could make the atmosphere hazardous, such as sludge or liquids, shall be removed before entry where possible. Air sampling is required prior to any entry into a confined space.

Mechanical ventilation must be provided where welding or cutting is done in confined spaces. All gas or oxygen cylinders and manifolds shall be located outside the confined spaces.

When used in confined spaces, portable lights and electric tools shall be grounded unless they are UL approved double insulated. Work in damp, confined spaces or metal tanks or enclosures requires exceptional protection from electrical hazards. Ground fault circuit interrupters, battery-powered equipment, or approved protected low voltage systems shall be used.

Sufficient lighting shall be provided in the confined space without use of matches or an open flame. Portable lights shall have protective guards to prevent bulb breakage. Explosion-proof plug-in lights, flashlights, and electric motors shall be used in confined spaces where flammable materials are present.

Where contact with any contaminants which could result in skin or eye irritation is possible, protective clothing shall be worn to prevent contact. This may include face shields, goggles, protective hats, gloves, sleeves, and rubber boots and rain jackets. Head protection is required except where it might constitute a hazard.

Prior to entry, workers shall be made familiar with diagrams and plans of the interior of the confined space, ladder locations, access openings and process lines.

The area surrounding the confined space entry point shall be kept clear of all debris of equipment, and the number of employees entering the space shall be kept to a minimum.

The entry permit must be hung at point of entry. A written record must be maintained at the point of entry of the name and time entered/exited.

When entering confined spaces, employees shall attach their personal identification badges to the confined space entry permit. They shall reclaim their badge upon leaving the confined space.

When an employee enters any confined space such as, but not limited to, a bin, silo, hopper or tank which contains bulk or loose material that could engulf the employee, the supply of material shall be shut off and the discharge shall be shut off if feasible.

The employee shall wear an approved, full safety body harness attached to an approved lifeline. The lifeline shall be strung from overhead and down to the employee where it is attached to the "D" ring on the full safety body harness and kept reasonably taut at all times. When this is done, another employee shall be in sight or within hearing distance.

Safety harnesses and lifelines shall be so attached to the employee entering the confined space that his body cannot be jammed in the opening.

Whenever employees are in a confined space, there shall be an attendant immediately outside the opening who shall have been trained in attendant duties and who shall be performing no functions other than that of an attendant.

Communications, such as visual, voice, or signal line shall be maintained between a rescue person outside the confined space and all employees inside the space. A mechanical means to lift the employee out of the confined space shall be provided.

In order to enhance communications, work being performed in confined spaces shall be planned far enough in advance so that responsible for the testing will schedule it accordingly.

5. AIR SAMPLING

Air sampling is necessary before entry is made. It is the responsibility of the Contractor whose employees will be entering any confined space (new or existing) to provide testing.

An extension wand attached to the air monitor shall be used when entering a horizontal type confined space.

Carbon monoxide levels must be monitored regularly in enclosed areas when temporary heaters, construction equipment and portable generators are being used. Should gases, vapors, fumes, ducts or mist levels be above the allowable OSHA Threshold Limit Values (TLV), the Contractor shall reduce them through engineering controls or have a respiratory program in place. In either case, the Contractor must provide maximum protection for those exposed, and comply with all City of Chicago, State of Illinois and Federal regulations.

Responsibilities for air sampling are as follows:

a. Contractor supervision has the responsibility for sampling air in the confined spaces they plan to access. Training for this duty will be provided by the Contractor.

b. Copies of test results shall be maintained onsite.

Where possible, testing of confined spaces must be conducted from outside the space. Where remote testing is not possible and entry must be made in order to perform the appropriate testing, respiratory protection, lifelines, and other necessary protective equipment and procedures designed for atmospheres immediately dangerous to life or health must be utilized while conducting these tests.

At no time shall sources of ignition be introduced into questionable atmospheres while testing is being done. This requirement will necessitate the use of spark proof flashlights in areas being tested, if such lighting is needed.

Prior to entry, all confined spaces shall be monitored and the atmosphere shall not exceed the following limits:

Oxygen	Not less than 19.5% or more than 23.5%
Combustible	10% of LEL
CO	35 P.P.M.
H2S	10 P.P.M.

Note: The Contractor shall be responsible for the testing of confined spaces, the issuing of permits, the training of employees, and the enforcement of all applicable standards.

E. DUST CONTROL PLAN

Each Contractor is responsible for controlling dust that:

a. Might endanger the health of employees or others.
b. Creates a nuisance to the general operations of the airport and public safety.
c. Creates a nonconformance to environmental regulations.

Should the dust levels be above the allowable Threshold Limit Value (TLV), the Contractor shall reduce them either through engineering controls, watering trucks, or sweepers. The Contractor must provide maximum protection for those exposed to dust, and comply with all City of Chicago, Chicago Department of Aviation, State of Illinois and Federal regulations.

The Contractor is responsible for keeping service roads, taxiways, and runways on which they are using or working, clean and free of debris.

F. HEARING PROTECTION

Each employee shall wear hearing protection in areas designated as high noise areas.

Contractors, foremen, supervisors and managers are responsible for insuring that each employee under their direction fully complies with the provisions of this program.

1. NOISE ASSESSMENT

Contractor shall be responsible to conduct general noise level surveys and personal monitoring to assess the need for hearing protection.

A survey shall be made initially and whenever there is a major change in operating conditions. If the survey indicates high noise areas (90 dBA or greater), the area shall be posted for hearing protection requirements and periodically, employees shall use personal monitors to identify inclusion in the program. The survey and personal monitoring shall be performed using sound level meters or noise dosimetry under the “A” weighing scale (slow response).

If the 8-hour time weighted average (TWA) equals or exceeds 85 dBA, the employee shall be enrolled in the Hearing Conservation Program.

The Contractor shall notify each employee exposed at or above the action level of an 8-hour TWA or 85 dBA, of the result of the monitoring.

2. HEARING PROTECTORS

The Contractor shall make hearing protectors available to all employees exposed to an 8-hour time weighted average of 85 dBA or greater at no cost to the employees. Hearing protectors shall be replaced as necessary.

Each supervisor, operator, etc., shall insure that hearing protectors are worn in all posted areas by all employees.

Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors (three minimum) where possible.

Training in the use and care of all provided hearing protectors shall be given to employees.

Proper initial fitting shall be assured and the correct use of all hearing protectors shall be supervised.

3. EMPLOYEE TRAINING

The Contractor shall provide a training program of all employees who are exposed to a noise level at or above an 8-hour time weighted average of 85 decibels. Training shall be documented with the documentation being maintained onsite

The training program shall be repeated annually for each employee working in the affected area. Information provided in the training program shall be updated to be consistent with changes in protective equipment and work processes. A copy of the training program and documentation of attendance shall be provided to the CM Manager of Safety.

The training program shall include:

- The effects of noise on hearing

The purpose of hearing protectors, including the advantages, disadvantages, and attenuation of various types, plus instruction on selection, fitting, use and care.

G. DRUG-FREE WORKPLACE

1. POLICY

All employees shall report to work in a physical condition that will enable them to perform their work in a safe and efficient manner.

All employees are prohibited from using, possessing, dispensing or receiving “prohibited substances” on CDA facilities.

The term “prohibited substances” (as used throughout this policy) means and includes illegal drugs (including controlled substances, look-alike drugs, designer drugs, synthetic drugs, unauthorized prescription drugs, prescription drugs not used for their prescribed purpose and alcohol).

The term CDA Facility (as used throughout this Policy) includes all property, facilities, land, building, structures, automobiles, trucks and other vehicles including construction job sites over which CDA has responsibility.

All employees are prohibited from reporting to work with a "measurable amount of a prohibited substance" in their system.

The term "measurable amount of a prohibited substance" (as used throughout this policy) is defined in the following table:

2. SCHEDULE OF MEASURABLE AMOUNTS OF PROHIBITED SUBSTANCES

	Per GC/MS Test	Per Emit Test
Amphetamines /Methamphetamines	1000 ng/ml	500 ng/ml
Barbiturates	300 ng/ml	150 ng/ml
Benzodiazepines	300 ng/ml	150 ng/ml
Marijuana	100 ng/ml	15 ng/ml
Cocaine	300 ng/ml	150 ng/ml
Methaqualone	300 ng/ml	150 ng/ml
Propoxyphene	300 ng/ml	150 ng/ml
Methadone	300 ng/ml	50 ng/ml
Opiates	300 ng/ml	300 ng/ml
Phencyclidine	25 ng./ml	25 ng/ml

Any employee taking "prescribed medication" which may affect their ability to perform their duties in a safe and efficient manner" is required to notify their immediate supervisor that such medication is being taken.

The term "prescribed medication" which may affect an employee's ability to perform the employee's work in a safe and efficient manner, means any prescription medication where the label indicates that the drug may cause drowsiness, imbalance, or includes a caution with regard to operating a vehicle or machinery, or may impair their ability to perform the work safely and efficiently.

3. ENFORCEMENT OF RULES

The CDA or CM, in order to enforce the rules, reserve the following rights:

a. Right to Inspect.

The CDA or CM have the right at all times, under all circumstances, and for any reason to inspect CDA controlled premises.

The CDA or CM has the right to inspect employees and their personal property, including but not limited to; their lockers, baggage, desks, tool boxes, clothing and vehicles located on CDA controlled premises if, and only if, the CDA or designated representative have a reasonable suspicion that the employee has violated some portion of this policy.

The CDA or CM will report the results of any search or inspection, which results in the discovery of prohibited substances, to the appropriate law enforcement authorities.

b. Right to Jobsite Access.

The CDA and its authorized representatives, or order to enforce the rules, reserves the following rights:

Note: The designated CDA representative has the same authority and rights as the Construction Manager (CM) under this section.

The Construction Manager has the right at all times, under all circumstances, and for any reason to access any jobsite. Once site is accessed, CDA or the designated representative can operate as it deems fit to maintain a safe jobsite.

c. Right to Require Drug / Alcohol Tests

The CDA or designated representative has the right to require a Contractor's employee to submit to drug and alcohol testing (as described below) if any one or more of the following occurs.

- If the employee is involved in or has directly or indirectly caused an "accident". The term "accident" shall mean any event or occurrence resulting in injury to a person or damage to property.

- If the employee is involved in or has directly or indirectly caused an "incident". The term "incident" shall mean an event or occurrence which has all the attributes of an accident, except that no injury was caused to a person or damage caused to property.

- If CDA or designated representative have a "reasonable suspicion" that a violation of this policy has occurred. The CDA or designated representative shall have such a "reasonable suspicion" in the event of erratic behavior such as noticeable imbalance, incoherence, and/or disorientation, or body odors of the employee.

d. Right to Obtain Information Concerning Prescription Medication.

The CDA or designated representative reserves the right to request an employee to identify the type of prescription medication and the dosage of prescription medication which is being taken by the employee and the period of time during which the employee expects to be taking the medication. If the CDA or designated representative determines that the prescription medication is likely to impair the employee's ability to perform the employee's assigned work safely and efficiently, then the CDA or CM Manager of Safety may ask that the employee be reassigned to a project not on CDA property.

4. PROCEDURES FOR DRUG OR ALCOHOL TESTING

If an employee is requested to submit to a drug and alcohol test, then the testing will be conducted in the following manner:

a. When the Tests will be Required

The CDA or CM Manager of Safety, through the Contractor's personnel (i.e., A Corporate Officer, Risk Manager, Manager of Safety, Superintendent, General Foreman and/or Foreman) will orally request the employee to submit to a drug and alcohol test and explain to the employee the reason why the tests are being

requested. The employee then is obligated to promptly submit to the tests as soon as practicable. In this regard, a representative will be entitled to accompany the employee to the Contractor testing facility.

b. Who will take the samples

The tests on the samples shall be conducted by an independent, certified or licensed, drug testing facility selected by the medical facility or by the medical facility itself. The employee shall be requested to sign a consent form authorizing the testing facility to conduct the tests. The tests shall be conducted at the expense of the Contractor.

c. What test shall be performed

The initial drug screening procedure or test shall be performed using an Enzyme Multiple Immunoassay Test (Emit Test). If the Emit Test indicates the presence of a measurable amount of a prohibited substance, then a second Gas Chromatography/Mass Spectrometry Test (GC/MS Test) shall be utilized.

d. What constitutes a "Positive" test for a prohibited substance

If the GC/MS Test confirms the presence of a measurable amount of a prohibited substance, then the test shall be deemed to be "positive" for the prohibited substance.

e. Alcohol Testing

All breath alcohol testing shall be conducted through use of an Evidential Breath Testing (EBT) device by a trained Breath Alcohol Technician. If the result of the screening test is less than 0.04 percent alcohol concentration the result of the test is negative and no further testing shall be done. If the result of the screening test is an alcohol concentration of 0.04 or greater, a confirmation test shall be performed. The confirmation test shall be performed not less than fifteen (15) nor more than twenty (20) minutes after completion of the screening test.

f. What constitutes a "Positive" test for alcohol

If the result of the screening test and confirmation test are 0.04 percent alcohol concentration or greater, the result is positive.

g. Consequences of a "Positive" drug or alcohol test

If an employee's test is positive for a prohibited substance, then the employee shall be deemed to have violated this Policy prohibiting the employee from reporting to work with a measurable amount of a prohibited substance in the employee's system.

5. EMPLOYEE'S RIGHTS

In connection with the testing procedures, the employee has the following rights:

a. The Contractor shall direct the testing facility to preserve part of the original samples for testing by the employee at the employee's expense.

b. The Contractor shall provide the employee with copies of the test results.

c. The Contractor shall keep the results of the tests confidential to the extent practicable.

d. The Contractor shall disclose the results of the tests only to persons who have a legitimate need to know the test results.

6. DISCIPLINARY ACTION FOR VIOLATIONS OF RULES

An employee who uses, possesses, dispenses or receives prohibited substances on airport property may be immediately removed and may be permanently barred from working at a CDA facility.

An employee who reports to work with a measurable amount of a prohibited substance in the employee's system shall be immediately removed and may be permanently barred from working on a CDA facility.

If an employee refuses to cooperate with the drug or alcohol testing procedures, then the employee shall be immediately removed and may be permanently barred from working at a CDA facility.

If the employee refuses to permit the CDA or CM Manager of Safety to conduct a search or inspection permitted under this Policy, the employee shall be immediately removed and may be permanently barred from working at a CDA facility.

If an employee fails to report the employee's use of a prescribed medication which will or may impair the employee's ability to perform the employee's job in a safe and efficient manner, then the employee shall be immediately removed and may be permanently barred from working at the City's Airport.

7. CONCLUSION

The Contractor's compliance and cooperation with this policy, including cooperation with CDA or the CM Manager of Safety requested drug and alcohol testing and inspection procedures, is a condition of employment. The failure of a Contractor to comply and cooperate with this policy shall be grounds for disciplinary action, including termination of the contract.

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VIII. EMERGENCY PROCEDURES

A. INTRODUCTION

The Contractor shall prepare written procedures governing actions to be taken in the event of serious injury, property damage or catastrophic events. These procedures shall be updated as the work progresses. Emergency procedures will include necessary action to be taken, who will take them, names of persons to be notified, and location of emergency equipment and supplies. These procedures will be provided to all key personnel involved and will be posted in conspicuous locations throughout the project.

B. GENERAL

At the time of the project job start-up, copies of emergency procedures shall be given to all supervisors. The Contractor's Superintendent shall review the program with each supervisor to be certain they understand the requirement and their responsibilities. Upon completion of the review, the project superintendent shall note in his job diary that he reviewed this procedure with the foremen, giving all pertinent information.

C. GENERAL PROCEDURES

All emergencies are to be handled by the highest-ranking person present, with whoever is available to assist.

Ranking person shall delegate responsibility for making emergency phone calls.

Emergency phone numbers are to be placed at conspicuous places throughout the jobsite.

The need for an ambulance or other emergency equipment shall be determined by the site personnel, except where a catastrophic event has occurred. In the event of a catastrophic occurrence, public authorities shall govern.

Where specific procedure has not been established, relative judgment should be used in determining what course to follow.

In all instances the CM Manager of Safety shall be notified immediately upon completion of emergency first aid treatment.

1. FIRE

    a. Make a safe attempt to extinguish, but in no way endanger yourself or others. At the same time, have the Chicago Fire Department notified. Assign an employee to meet the fire department at the site entrance to provide directions to the location of the fire.
    b. Insure that employees in adjoining work areas are evacuated to a safe area.
    c. Keep all spectators and non-essential employees away from the fire.
    d. If explosive-type materials are involved immediately evacuate all personnel.
    e. Make no comments to media representatives. Refer all inquiries to the Supervising Consultant.

2. ACCIDENTS INVOLVING SERIOUS INJURY OR DEATH

a. Provide for necessary first aid. Send for medical personnel.
b. Remove and/or keep back all non-essential personnel.
c. Provide assistance to rescue personnel as requested.
d. Make no comments. Refer all inquiries to the Chicago Department of Aviation.
e. Allow no pictures to be taken except on approval of CDA or designated representative.
f. Notify CM Manager of Safety immediately. Make full investigation and file the written report within twenty-four (24) hours.

3. PROPERTY DAMAGE ACCIDENTS

a. Notify CM Manager of Safety
b. Protect against further damage where possible
c. Where the possibility of fire, explosion or electrical injury exists, take additional measures as necessary to protect personnel.
d. Keep all spectators and non-essential employees back and/or away from the area.
e. Make no comments. Refer all inquiries to Chicago Department of Aviation.
f. Allow no onsite pictures to be taken except on approval by the Construction Manager.
g. Make full investigation and file report within twenty-four (24) hours.

4. BOMB THREAT

When a bomb threat is received for the first time, the project or office shall be evacuated immediately. Notify the City of Chicago Police Department immediately. A search of the premises will be made by the City of Chicago Police Department. If a suspicious article is found - DO NOT TOUCH IT – leave the area – notify the appropriate authorities immediately.

If no bomb is found and a second threat is made shortly after the first one, the premises should be evacuated again and searched again by the City of Chicago Police Department. If a third threat occurs under similar circumstances, which make the threat appear to be a mere continuation of the same pattern of false claims, careful evaluation of the circumstances by the City of Chicago Police Department may indicate a need for no further action.

If a threat occurs after a substantial period of time has elapsed since the previous threat, or if for any reason the threat seems to be unrelated to the earlier threats, the above procedures of evacuation, etc., shall be followed.

The evacuation will consist of all personnel on the project or in the office. A count will be made to assure all are present.

Do not allow anyone except authorized personnel to re-enter the area.

If necessary to stop or detour traffic away from the affected area, utilize the City of Chicago Police or Contractor’s flagperson.

Notify any affected businesses or residents who may be endangered.

Allow no photos. Make no comments. Refer all inquiries to the Chicago Department of Aviation.

IX. INSPECTIONS

A. RESPONSIBILITIES

1. CONTRACTOR

The Contractor has the responsibility to stop work at any time an imminent danger to persons or property exists with their own operation or with the operation of a subcontractor. The Contractor will receive no recompense for additional cost or time extension.

The Contractor shall periodically inspect all areas under their control. The Contractor shall insure that at least a thorough, documented inspection is completed on a weekly basis (FAA funded projects shall have a documented daily inspection). Such documented inspections shall be forwarded to the CM Manager of Safety. The CM Manager of Safety shall forward a copy of inspection reports to the designated CDA safety representative.

2. CONTRACTOR'S SUPERVISION

Each Contractor supervisor shall insure that ongoing observations are done in their area(s) of responsibility for the purpose of identifying and correcting hazards and deficiencies. This activity should be an ongoing responsibility of all supervisors.

3. INDIVIDUAL EMPLOYEES

Each employee shall be held responsible for identifying hazards and deficiencies in their immediate work area.

B. HAZARDS/DEFICIENCIES

The following is a partial list of items that need to be checked during each inspection:

1. Proper storage of materials.
2. Scrap material in proper containers.
3. Overflowing trash containers.
4. Unused tools in proper place.
5. Signs appropriate and legible.
6. Walkways unobstructed.
7. Storage areas disorderly.
8. Spills not wiped up.
9. Oily rags left in the open, not in required metal containers.
10. Flammable materials in unauthorized containers.
11. Ladders – Not properly secured, broken or missing rungs, cracked side rails, etc.
12. Catwalks – No guardrails installed, lack of toeboards, obstructed, etc.
13. Scaffolding – Improperly installed or secured, in poor repair, missing components, not authorized, etc.
14. Compressed Gas Cylinders – Unsecured, improper storage, caps missing, hoses and regulators left pressurized, etc.
15. Tripping/Slipping Hazards – Temporary hoses/cord/pipes strung across walking surfaces, holes in floor/decking/grating, oil or water on floor, obstruction at the bottom of stairs/ladders/ramps, etc.
16. Protrusions – Into aisles/walkways without protective devices or warnings.

17. Chemical Containers – Proper labeling and storage, barrels equipped with vent bungs and stored out of direct sunlight, no incompatibilities stored together, precautionary signs legible and strategically located, etc.
18. Equipment does not have guards installed.
19. Safety latches are not installed where required.
20. Safety signs are not posted where required.
21. Failure to wear hard hats, safety glasses, proper footwear and hearing protection when required.
22. Working on energized/pressurized equipment without proper approval and protective equipment and clothing.
23. Handling chemicals without proper protection, i.e., no apron, face shield, gloves, boots, respirator, etc., when required.
24. Improper lifting methods.
25. Lack of fire-watch for welding, flame cutting and grinding operations.
26. Attendant improperly located during confined space entries.
27. Smoking in prohibited areas.
28. Failure to comply with tagging and lockout requirements.
29. Working at heights over six feet without fall protection/harnesses when outside a protected area (properly erected scaffolding, etc.).
30. ABC Dry Chemical type fire extinguishers not in place, inspection not up to date, safety pin not sealed, evidence of damage/discharge, etc.
31. Emergency cabinets improperly stocked or in disarray
32. Access to emergency equipment not clear (i.e., fire extinguisher/hoses, eye wash stations, emergency shower, etc.)
33. Zones not clearly marked or posted
34. Permits not posted
35. Warning signs are not posted
36. Welding machines operating when unattended and not in use
37. Leads and hoses improperly routed through doorways without protection from damage
38. Inadequate illumination for the work being performed
39. Cages not installed around light bulbs on drop cords
40. Ground Fault Circuit Interrupters not in place

In addition to the Contractor's inspections, the CM Manager of Safety shall on a periodic basis, inspect each ongoing project. The Contractor shall correct serious violations immediately and shall have twenty-four (24) hours to correct all deficiencies and to respond in writing to the CM Manager of Safety as to what corrective action has been taken. Unsafe areas will be barricaded to prevent exposure to employees and the public.

The Contractor shall document corrective action and forward the documentation to the CM Manager of Safety. Should the same deficiency be noted on two consecutive inspections, a letter outlining CAS inspection process and detailing the noted deficiencies shall be sent to the Contractor's home office requesting assistance in correcting the deficiency.

Should the same deficiency be noted on a third consecutive inspection, the same type of letter mentioned in the above paragraph shall be sent to the Contractor's insurance carrier.

If corrective action is still not forthcoming, further action will be taken. This action may include withholding payments or stopping all work until a meeting with the Contractor principals and the insurance carrier can be arranged.

C. OSHA INSPECTIONS

1. WARRANTS AND RIGHT OF ENTRY

This policy is not intended to abridge the constitutional rights of the Contractors or subcontractors who have the right to request a warrant prior to the inspection of their work areas.

Each Contractor or subcontractor must advise the CM Manager of Safety in writing if they require a warrant prior to inspection.

2. HARASSMENT

Federal Compliance Officers (CO), State of Illinois inspectors, or similar personnel are not to be harassed, intimidated, or abused. Problems that may arise during the inspection, which cannot be resolved, are to be referred to the CM Manager of Safety.

Chicago Department of Aviation Safety will be immediately contacted if the Contractor refuses to allow entry of a Federal Compliance Officer.

Federal and State of Illinois safety agencies may impose severe penalties against person and/or companies who fail to abide with this section.

Penalties may include monetary fines and jail terms.

3. INSPECTION CLASSIFICATIONS

There are two (2) basic classes of inspections:

a. General scheduled inspection.

Companies are randomly selected by computer. Inspectors then schedule an inspection. Once entry to the site is obtained by either permission or warrant, the inspector may move freely about the site.

Should the inspectors desire to enter a restricted area which contains trade secrets or hazardous materials, they should be advised to contact their office for direction.

b. Complaint Inspection

Inspectors wishing to conduct a complaint inspection need not obtain a warrant, but must deliver to the Contractor a properly executed copy of the complaint form.

This type of inspection does not grant the inspector free movement within the site. The named Contractor has the right to determine the route to the complaint area, so long as it is not unreasonable.

The inspectors may not enlarge the inspection into other areas, nor may they concern themselves with non-serious conditions observed en route to the complaint area.

However, should an imminent condition be observed, the inspectors may involve themselves should they desire. (An “imminent danger” is one reasonable expected to result in death or permanent injury).

Disaster accidents involving death or multiple injuries come within the parameters of a compliant inspection. Fatal injuries and complaint inspections are given priority. Persons initiating complaint inspections need not be named on the complaint form and may remain anonymous.

4. RIGHTS AND PRIVILEGES

a. Employer:

The employer has the right of representation during the inspection. The representative may question the acts and comments of the inspector and may also request clarifications where the actions of the inspector appear to be contrary to the rules of inspection.

The employees have the right of representation, through their craft union, during the inspection. They may also answer questions regarding the inspection without fear of punitive actions by the employer.

b. Compliance Officer:

The Compliance Officer has the right to take photographs, samples of material atmosphere and measurements as they relate to the inspection. They may also privately interview employees. They may not, however, unduly disrupt work.

5. CITATIONS

As a result of an inspection, citations and notice of monetary penalty may be received onsite. Should a citation/penalty notice be received, the following must be done:

Immediately forward copies of the material received along with completed copies of inspection records and pictures to the CM Manager of Safety.

Post copies of citations near the area cited. Postings must remain for three (3) working days or until corrections have been made.

Each citation provides for the removal of assessed penalty figures. This section is to be detached before citations are copied and posted.

Failure to post citation is punishable by fine.

6. WHAT TO DO WHEN OSHA INSPECTS

a. INTRODUCTION

This is to assist you in the event of an inspection of your site by an Occupational Safety and Health Administration Compliance Officer. Its purpose is to provide a guide for chronological recording of information and evidence to support an affirmative defense.

The forms should be copied in an amount to provide for field use during inspection. At the completion of the inspection, final forms should be typed and photographs attached.

It is extremely important that all information be accurate, that pictures are clear, and that measurements be accurate since the information may be introduced as evidence under oath at a formal court hearing.

b. COMPLIANCE OFFICERS

The function of the Compliance Officers (CO) is to identify, measure and photograph conditions and/or acts which they consider unsafe and in violation of the construction safety regulations.

In the pursuit of their duties they may go wherever they wish on the project. They may take any samples or measurements they feel are important. They can request copies of any literature, documents, or contracts, which relate to safety or industrial hygiene.

Compliance Officers may not violate any known safety regulation. They are responsible for providing and wearing personal safety equipment where such is needed. Failure to comply with the safety program is cause for not permitting them onsite or stopping an inspection that is already in progress. Should this occur, institute the following procedure:

- Advise the CO that they are in violation and ask that they comply with the safety program.

- Failing item above, photograph CO in unsafe condition – discontinue participation in inspection, notify OSHA Area Director and the CM Manager of Safety.

- The CO may consult with employees regarding matters of safety and health to the extent that it is necessary for the conduct of an effective and thorough inspection. The conduct of inspection shall be such as to preclude unreasonable disruption of operations on the project.

c. CONTRACTOR REPRESENTATIVE

The Contractor's assigned project superintendent shall serve as employer's representative. They will keep the notes, take the photographs and shall accompany the inspection party for its duration.

Information given should be only information requested. The superintendent should refrain from entering into debates or discussions about alleged violations, exceptions, or regulations applicability, nor should they volunteer information not requested.

Because the CO says it does not necessarily make it so, an alleged violation does not become an affirmed violation unless the employer accepts the citation, or when contested, the judge affirms the citation.

d. PHOTOGRAPHS

Photographs may be taken of every item or action the CO inspects. Two pictures are to be taken. One from the angle and location of the CO, the second is to be an overall picture of the area surrounding the violation.

An example of this would be an exposed shaft.

Close-up, it's a violation, however, if an overall picture shows that the shaft is not readily accessible, then possibly no violation exists.

Photographs are to be taken with a camera which produces a negative, and if possible, with a date-imprint. This permits additional copies to be ordered at time of processing.

Each picture should have the following information on the back:

- Project name and number
- City and State
- Location by floor and area, i.e., 4th floor, Column J-4 Mechanical Room
- Date and time of picture
- Brief description of the picture
- Name or initials of person taking the picture and picture numbered chronologically

e. CONDUCTING THE INSPECTION

The Compliance Officers will present their identification to the Contractor and state the purpose of the visit. They will request that an opening conference be held with a representative of the Contractor they wish to inspect and the Contractor's union steward.

Absent the need for a warrant, the Compliance Officer will begin the opening conference.

The Compliance Officer will:

1. State the nature of the inspection, general compliant, target industry, other.

2. State the approximate time he will be onsite.

3. Request copies of safety program, accident reports, and inspection surveys. He may not review any contract documents other than general conditions and similar front-end documents.

4. Approve members of the inspection party. Each member has a right to representation and the compliance Officer has the right to choose the representative. Disruptive conduct by the employer/employee representatives is cause for dismissal from the inspection party.

5. Generally discuss the purpose of the OSHA Act, its sanctions, and the authority vested in them by the Act.

6. Advise that at the conclusion of the inspection, a closing conference will be held to advise of any alleged violations noted, to determine corrective dates and answer questions.

f. DURING THE INSPECTION

Allow the Compliance Officer to lead.

Do not permit unneeded employees to linger near the inspection party.

Do not harass, threaten or otherwise intimidate the Compliance Officer.

Keep a chronological record of where the Compliance Officer goes, whom he talks with and how long he talks to employees and whether he returns to a location previously inspected.

When photographs are taken, ask the nature of the suspected violation and record on the “Inspection Notes” form.

g. THE CLOSING CONFERENCE

At the completion of the inspection, the Compliance Officer will either hold a general meeting or meet with each individual Contractor. The CM Manager of Safety representative should attend all meetings, if held individually, for the purpose of recording each Contractor’s alleged violations.

Remainder of page left intentionally blank.

X. EMPLOYEE DISCIPLINARY PROGRAM

A. POLICY

In an effort to make individuals more responsible for their own safety, the following disciplinary program is being implemented:

1. First safety violation – a written warning

2. Second safety violation – the individual's privilege to work at the airports will be revoked for a period of three days.

3. Third safety violation – the individual's privilege to work at the airport will be permanently revoked.

Note: A serious violation may result in a higher degree of discipline being imposed up to and including permanent revocation of work privileges.

Serious violations are acts, which could result in serious bodily injury or death to themselves or to others i.e., failure to follow confined space procedures, working from heights where fall protection is required, unsafe excavations, etc.

B. PROCEDURE

All personal violations will be recorded on Safety Violation notice form and will be recorded.

A Safety Violation Notice may be initiated by any Project Manager, Resident Engineer, Contractor supervisory staff or Safety Department staff.

When a violation notice is written, copies will be given to the project Superintendent, who will have the responsibility of discussing the violation with the employee and having the employee to sign the violation form. If the employee refuses to sign the form the superintendent will write "Refused to Sign" in the space. A copy will then be given to the employee with a copy forwarded to the CM Manager of Safety.

C. APPEAL

An employee who wishes to appeal a Safety Violation notice may do so by appealing in writing to the CM Manager of Safety. The decision of the CM Manager of Safety will be final.

E X H I B I T S

Exhibit V-1	Field Cable Locate Request
Exhibit V-2	O'Hare Underground Construction Notification
Exhibit V-3	Request for FAA Assistance
Exhibit V-4	Incident Report Form
Exhibit V-5	Hot Work Permit Sample
Exhibit V-6	Confined Space Permit Sample
Exhibit V-7	ORD Notice to Airport Users

EXHIBIT V-1

Field Cable Locate Request

Date: _____

Primary Contractor Information

Company Name: _____

Address: _____

City: _____

State: _____ Zip Code: _____

Point of Contact: _____

Title: _____

Phone Numbers: O _____

C _____

Sub-Contractor Information

Company Name: _____

Address: _____

City: _____

State: _____ Zip Code: _____

Point of Contact: _____

Title: _____

Phone Numbers: O _____

C _____

Related Project: _____

Latitude and Longitude of requested locates. Attach separate sheet if needed.

LAT/LONG IS IN NAD83 FORMAT ONLY

Latitude: _____

Longitude: _____

Was or is there a Pre-Construction Meeting? Yes ☐ No ☐

If yes, Date: _____ Time: _____ Location: _____

Is there an Airspace Case Filed? Yes ☐ No ☐ If Yes, Case Number: _____

Additional Comments:

Completed By FAA Rep. _____ Date: _____

Contractor Rep. Signature _____

Upon completion fax this document to FAA 773-601-7702

EXHIBIT V-2

CHICAGO DEPARTMENT OF AVIATION
UNDERGROUND CONSTRUCTION NOTIFICATION

I. PROJECT INFORMATION

A. Project Name _____ Date: _____

1. Project No. _____
2. Resident Engineer _____

B. Work Location _____

C. Description of Work _____

_____

D. General Contractor _____

1. Name of Superintendent/Foreman _____ 24 Hr. Phone _____
2. Name of Superintendent/Foreman _____ 24 Hr. Phone _____

E. Subcontractor _____

1. Name of Foreman _____ 24-Hr. Phone _____
2. Name of Superintendent _____ 24 Hr. Phone _____
3. Name of Foreman _____ 24 Hr. Phone _____

F. Anticipated Dates of Work _____

G. Anticipated Hours of Work ☐ _____ Days ☐ _____ Nights

Remarks / Clarifications (as necessary): _____

_____

_____

H. Scheduled Pre-Activity Meeting

1. Pre-Activity meeting scheduled: Time: _____
   Date: _____
   Location: _____

   Optional: Utility Locate Meeting Time: _____
   Date: _____
   Location: _____

2. Has the Pre-Activity meeting notification email been sent? ☐ Yes ☐ No
   * Attach email for documentation

II. DOCUMENTATION

A. Pre-Activity Meeting Minutes

1. Meeting Date and Time: _____
2. Meeting Location: Field / Office: _____
3. Organizations in Attendance:

					Primary Representative at Meeting (SIGNATURE)
a.	Construction Manager	☐	Yes	☐ N/A	
b.	General Contractor	☐	Yes	☐ N/A	
c.	Subcontractor	☐	Yes	☐ N/A	
d.	FAA Facilities	☐	Yes	☐ N/A	
e.	CDA Operations	☐	Yes	☐ N/A	
f.	CDA Facilities	☐	Yes	☐ N/A	
g.	Other: _____	☐	Yes	☐ N/A	
h.	Other: _____	☐	Yes	☐ N/A	

4. Key Discussion Points: _____

_____

_____

_____

5. Meeting Minutes Available: ☐ Yes ☐ NO

B. FAA Cable Locate Forms

1. Have FAA cable locate forms been submitted? ☐ Yes ☐ No ☐ Copies in Binder

   Note: FAA cable locate forms must be submitted three (3) days prior to the cable locate being performed in the field (The 3-Day Notice excludes Holidays, Saturdays and Sundays).

2. Did you receive an approved copy? ☐ Yes ☐ No ☐ Copies in Binder

   * The FAA has been onsite to give the contractor location of FAA utilities.

C. FAA Assistance Forms

1. Have FAA assistance forms been submitted? ☐ Yes ☐ No ☐ Copies in Binder

   Note: FAA cable locate forms must be submitted five (5) days prior to the desired assistance being performed in the field (The 5-Day Notice excludes Holidays, Saturdays and Sundays).

2. Did you receive an approved copy? ☐ Yes ☐ No ☐ Copies in Binder

   * Not Required.

D. CDA User Form (if applicable)

1. Has the CDA User Form been submitted? ☐ Yes ☐ No ☐ Copies in Binder
2. Was the CDA User Form approved? ☐ Yes ☐ No ☐ Copies in Binder

II. DOCUMENTATION (Continued)

E. Airspace Case Study

1. Has the Airspace Case Study been approved? ☐ Yes ☐ No ☐ Copies in Binder
2. Approved Airspace Case No. _____
3. Was a post Airspace Case Study review conducted with the FAA? ☐ Yes ☐ No ☐ Copies in Binder

F. Applicable Installation Documentation

1. Shop Drawings ☐ Yes ☐ No ☐ N/A
2. Submittals ☐ Yes ☐ No ☐ N/A
3. Field Orders ☐ Yes ☐ No ☐ Copies in Binder
4. RFI's ☐ Yes ☐ No ☐ Copies in Binder
5. Work Related Drawings and Specifications ☐ Yes ☐ No ☐ Copies in Binder
6. Field Sketches ☐ Yes ☐ No ☐ Copies in Binder
7. Composite Utility Drawings ☐ Yes ☐ No ☐ Copies in Binder

III. UTILITY / FACILITY IMPACTS

A. Anticipated / Potential Impacts

1. Facilities Affected or Nearby _____

B. Additional Power Sources

1. Does the Facility currently have backup power? ☐ Yes ☐ No ☐ N/A
2. List items on backup power
   a. _____
   b. _____
   c. _____
   d. _____
   e. _____
3. Remarks (if necessary) _____

III. UTILITY / FACILITY IMPACTS (Continued)

4. Generator Power

a. Is a Generator necessary to provide temporary power to Facilities before work starts?

☐ Yes Who _____

☐ No Date / Time _____

☐ Standby Only How _____

b. What Facilities require Generator Power?

_____

_____

_____

IV. DELINEATION OF CRITICAL AREA / SAFETY AREA

A. Safety Areas

1. Have the Safety Areas (RSA/TSA) been identified?
☐ Yes ☐ No ☐ N/A
Runway (RSA) = 200' From Centerline
Runway (RSA) = in front of Existing Localizer
Taxiway (TSA) = 131' From Centerline

2. Have the Object Free Areas been (ROFA/TOFA) been identified?
☐ Yes ☐ No ☐ N/A
Runway (OFA) = 400' From Centerline
Runway (OFA) = 1,000' From RW End
Runway (OFA) = 160' From Centerline

B. Critical Areas

1. Have the navigational critical areas been identified with snow fence or silt fence to ensure adequate recognition of the area?
☐ Yes ☐ No ☐ N/A Fence to be installed prior to work

C. Review of delineation of critical / safety areas.

1. Have the governing agencies reviewed the proposed delineation plan?
☐ CDA ☐ FAA ☐ N/A All Pre-Activity Meeting

V. UTILITY LOCATES

A. Layout of Proposed or New Work

1. Has the Contractor clearly identified the line of the proposed excavation? (If YES, See Utility Drawing) ☐ Yes ☐ No

B. Utility Locate Organization

1. Identify organizations that have completed utility locates.

☐ FAA Date: _____

☐ CDA Date: _____

☐ DIGGER No. _____ Active Date: _____

☐ JULIE No. _____ Active Date: _____

☐ OTHER: (Explain) _____ Date: _____

☐ OTHER: (Explain) _____ Date: _____

V. UTILITY LOCATES (Continued)

2. Identified Utilities

Have all known Utilities around the Facility (FAA, DOA, ComEd, SBC, AGI, Other) been physically located on the ground by the FAA, and others as applicable? (Identify point of origin and point of termination for each line)

a.	Power	☐	N/A	☐	Yes	☐	No	☐ Origin	☐ Termination
b.	Control	☐	N/A	☐	Yes	☐	No	☐ Origin	☐ Termination
c.	Grounding	☐	N/A	☐	Yes	☐	No	☐ Origin	☐ Termination
d.	Comm / Data	☐	N/A	☐	Yes	☐	No	☐ Origin	☐ Termination
e.	Water	☐	N/A	☐	Yes	☐	No	☐ Origin	☐ Termination
f.	Sewer	☐	N/A	☐	Yes	☐	No	☐ Origin	☐ Termination
g.	Other	☐	N/A	☐	Yes	☐	No	☐ Origin	☐ Termination

* Origin and Terminal have been determined within the job limits.

C. Contractor's Proposed Method of Identifying Known Utilities

1. Vacuum Excavating ☐ Yes ☐ No
2. Ground Penetrating Radar ☐ Yes ☐ No
3. Hand Excavation ☐ Yes ☐ No
4. Other. Explain _____
5. Were all known utilities identified? ☐ Yes ☐ No

   If no, which known utilities were not identified and why? _____

6. ☐ Yes ☐ No

   If yes, the the space below, describe the nature of the situation and the actions taken:

D. Utility Delineation

1. Has the ten foot (10') utility channel "five feet (5') on either side of the know utilities" been marked or delineated with Snow Fence, Orange Silt Fence or PVC indicators where the new work crosses the utility?

   Requesting Variance to this Procedure ☐ Yes ☐ No

2. Runways

   Are utility locates required within the Runway Safety Area (RSA)? ☐ Yes ☐ No

   Identify the method the utility locates have been identified. ☐ Paint ☐ Flags

   ☐ Potholed / Hydroexcavated and marked using PVC and Surveyed

No Utility Locates Shall Be Performed Within the Runway Safety Area While the Runway is Open to Air Traffic. All runway safety area locates must be performed between the hours of 2200 and 0600 (10:00 pm – 6:00 am).

V. UTILITY LOCATES (Continued)

3. Taxiways

Are utility locates required within the Taxiway Safety Area (TSA)? ☐ Yes ☐ No – N/A

Identify the method the utility locates have been identified. ☐ Paint ☐ Flags

The scheduling of utility locates within a Taxi Safety Area (TSA) shall be coordinated with CDA Operations.

E. Protection and Delineation of Existing Facilities

1. Have Snow Fence, Silt Fence, Barricades or other protective devices been installed around nearby existing Facilities, i.e. Buildings, Antenna, Transformers, Markers, RVRs, LLWAS, etc. to ensure adequate recognition?

☐ Yes _____
(Facility)

☐ Yes _____
(Facility)

☐ Yes _____
(Facility)

☐ Yes _____
(Facility)

☐ Yes _____
(Facility)

F. Deviation from Approved Procedure – Request for Waiver

1. If approved procedural means of excavating have been determined to be ineffective, have you sough approval for an alternative approach to the work? ☐ Yes ☐ No

2. If yes, describe the approach that is not effective, and then describe the proposed alternative method of approach.

a. Ineffective method: _____

_____

_____

b. Proposed method: _____

_____

_____

3. Was a "Waiver" from the planned approach sought and approved? ☐ Yes ☐ No

By Whom: _____

Date / Time: _____

How _____

VI. ACKNOWLEDGMENT OF NOTIFICATION

General Contractor

Signature Required _____ Date _____

Construction Manager

Signature Required _____ Date _____

Federal Aviation Administration

Signature Required _____ Date _____

Chicago Department of Aviation

Signature Required _____ Date _____

Other

Signature Required _____ Date _____

VII. AUTHORIZATION TO COMMENCE WORK

Print Name _____

Signature Required _____ Date _____

EXHIBIT V-3

Request for FAA Assistance

Date: _____

Primary Contractor Information

Company Name: _____

Address: _____

City: _____

State: _____ Zip Code: _____

Point of Contact: _____

Title: _____

Phone Numbers: O _____

C _____

Sub-Contractor Information

Company Name: _____

Address: _____

City: _____

State: _____ Zip Code: _____

Point of Contact: _____

Title: _____

Phone Numbers: O _____

C _____

Related Project: _____

Type of assistance needed. Example, site access, _____

_____

Date and time assistance is needed: _____

Was or is there a Pre-Construction Meeting? Yes ☐ No ☐

If yes, Date: _____ Time: _____ Location: _____

Is there an Airspace Case Filed? Yes ☐ No ☐ If Yes, Case Number: _____

Additional Comments:

Completed By FAA Rep. _____ Date: _____

Contractor Rep. Signature _____

Upon completion fax this document to FAA 773-601-7702

EXHIBIT V-4

Chicago Department of Aviation Capital Improvement Program Incident Report

Submit a copy of this report within 24 hours of incident to:

CARE PLUS LLC
10510 W. Zemke
Chicago, IL 60666
ATTN: Mark Leipold
Senior Safety Officer

Telephone: 773.447.4952
Email: Mark.Leipold@cityofchicago.org
Fax: 773.894.3780

Date of Incident: _____

Time of Incident: _____ a.m./p.m. **(Circle one)**

Today's Date: _____

Time: _____ a.m./p.m. **(Circle one)**

Contractor Information

General Contractor: _____ *Project Name:* _____

Project Number: _____ *Subcontractor:* _____ *(N/A if none)*

Chartis Project Code: _____

Type of Incident (Check all that apply)

- ☐ Bodily Injury/Illness
- ☐ Property Damage
- ☐ Motor Vehicle
- ☐ Aircraft
- ☐ Other _____

Action (Please check all appropriate boxes)

- ☐ OCC Notified **(773) 894-9111**
- ☐ MCC Notified **(773) 838-9111**
- ☐ Non-CDA Emergency Agency Notified _____ *(List Outside Fire, Ambulance, Police or other)*
- ☐ Taken to Clinic: _____ *(Provide Name and Address of Clinic*
- ☐ Emergency Medical Services **Provided**
- ☐ Emergency Medical Services **Not Provided**
- ☐ Emergency Medical Services **Refused**
- ☐ Other: _____

Incident Involvement (Please check all appropriate boxes)

- ☐ Contractor Employee
- ☐ Subcontractor Employee
- ☐ Passenger/Public
- ☐ Utility Damage
- ☐ Security Incident
- ☐ Wildlife Incident
- ☐ Other (Describe) _____
- ☐ Aircraft
- ☐ Fire
- ☐ HazMat Incident
- ☐ Runway Incursion
- ☐ City Vehicle
- ☐ Non-City Vehicle

Site Conditions

Weather:	☐ Clear	☐ Snow
	☐ Overcast	☐ Fog
	☐ Temp. °F	☐ Sleet
	☐ Rain	☐ Windy
Surface:	☐ Wet	☐ Ice
	☐ Snow	☐ Dry
	☐ Cracked	☐ Uneven
	☐ Pothole	☐ Mud
Light:	☐ Daylight	☐ Night
	☐ Dawn	☐ Artificial
	☐ Dusk	☐ Glare

Injured Person's Work Status

- ☐ Light Duty Restrict. (Describe) _____
- ☐ Lost Time Incident
- ☐ Full Duty - No Restrictions

Bodily Injury/Illness (Individuals/Parties who were injured)

Name of Person	Name of Person
Address of Person (Number, Street, City, State, Zip Code)	Address of Person (Number, Street, City, State, Zip Code)
Telephone	Telephone
Description of Injury/Illness _____	Description of Injury/Illness _____

Property Damage Information (Contractor is responsible for obtaining police report)

Type of Property ☐ City Owned ☐ Non-City Owned	Describe Property Damage (Building, #, Aircraft, Airfield, Utility)

Motor Vehicle Incident Information (Contractor is responsible for obtaining police report)

Type of Vehicle ☐ Automobile ☐ Bus ☐ Truck ☐ Other	Describe Vehicle Incident (Include Vehicle type, year, model, number, license #, location)
List police deparment(s) completing accident reports	Police Report Number ☐ City State County Airport (Circle)

Witness Information (Use additional sheets for more witnesses)

Name of Person	Name of Person
Address of Person (Number, Street, City, State, Zip Code)	Address of Person (Number, Street, City, State, Zip Code)
Telephone	Telephone

Individual Completing Report

Name of Person	Were you an eyewitness to the incident? ☐ Yes ☐ No
Company/Your Position	Telephone
Signature	Date

Cause of Incident (Please be as thorough as possible)

Describe Incident: (Use additional paper if needed) Please Check Box if Pictures Were Taken ☐	Please use this area to sketch incident area. Use north arrow and dimensions

Additional Information (Use this page to provide more detailed information not mentioned above)
Use this space to also describe injury in detail and medical disposition
Describe, in detail, the corrective actions that will be taken to prevent reoccurrence

USE THIS AREA FOR EYEWITNESS STATEMENTS - MAKE COPIES AS NEEDED

BE CERTAIN TO OBTAIN SIGNATURES AND DATES FROM ALL WHO ARE PROVIDING STATEMENTS

EXHIBIT V-5

HOT WORK PERMIT

All temporary operations involving open flames or producing heat and/or sparks require a Hot Work Permit. This includes, but is not limited to, Brazing, Cutting, Grinding, Soldering, Thawing, and Welding. This form must be prepared and signed prior to the start of any Hot Work operation for each shift that Hot Work Occurs.

INSTRUCTIONS FOR FIRE SAFETY SUPERVISOR

Project Name & # _____

Contractor: _____

DATE | Time Period

Start: Finish:

LOCATION/BUILDING & FLOOR (Be Specific)

DESCRIPTION OF WORK BEING PERFORMED

NAME OF SUPERVISOR AUTHORIZING HOT WORK

NAME OF PERSON DOING HOT WORK

NAME OF FIRE WATCH

The above location has been examined, the precautions checked on the Hot Work Checklist have been taken to prevent fire, and permission is authorized for this work.

SIGNED: _____
(Permit Authorizing Individual)

SIGNED: _____
(Person doing Hot Work)

I will execute my responsibilities as a Fire Watch in accordance with the CAS requirements to the best of my abilities.

SIGNED: _____
(Fire Watch)

FIRE WATCH SIGNOFF

Work area and all adjacent areas to which sparks and heat might have spread were inspected during the fire watch period and were found fire safe.

Signed: _____

FINAL CHECKUP (minimum 30 minutes after Hot Work)

Work area was monitored for_____hours(s) following Hot Work and found fire safe.

Signed: _____

FILL OUT EMERGENCY INFORMATION ON BACK OF Page 2.

Sample

OK	HOT WORK CHECKLIST	N/A
☐	Is there an approved User Form for the Hot Work?	☐
☐	Have the participants in this work been appropriately trained for this activity	☐
☐	Is the area ventilated?	☐
☐	Will the smoke and fumes affect operations?	☐
☐	Will an effort be made to capture and filter the fumes?	☐
☐	Will the fumes set - off a local smoke alarm?	☐
☐	Will the fumes travel to other areas? If so list precautions to be taken.	☐
☐	Hot Work Equipment in good condition (e.g., power source, welding leads, torches, ect.) Multi-purpose ABC fire extinguisher charged & ready for use?	☐
	REQUIREMENTS WITHIN 35 FEET OF WORK	
☐	Dust, Lint, Debris, Flammable Liquids and oily deposits removed; floors swept clean	☐
☐	Explosive atmosphere in area eliminated.	☐
☐	Combustible floors (e.g., wood, tile, carpeting) wet down, covered with damp sand or fire blankets.	☐
☐	Remove flammable and combustible material where possible. Otherwise protect with fire blankets, guards, or metal shields.	☐
☐	All wall and floor openings covered.	☐
☐	Walkways protected beneath hot work.	☐
	WORK ON WALLS OR CEILINGS	
☐	Combustibles moved away from other side of wall.	☐
	WORK IN CONFINED SPACES	
☐	Confined space cleaned of all combustibles (example: grease, oil, flammable vapors).	☐
☐	Containers purged of flammable liquids/vapors.	☐
☐	Follow confined space guidelines.	☐
	FIRE WATCH/HOT WORK AREA MONITORING	
☐	Fire watch will be provided during and for 30 minutes after work, including any coffee or lunch breaks	☐
☐	Fire watch may be required for opposite side of walls, above, and below floors and ceilings.	☐
☐	Fire watch is supplied with an appropriate charged extinguisher, also making use of other extinguishers located throughout work area.	☐
☐	Fire watch is trained in use of this equipment and is equipped to notify the OCC/MCC in the event of an emergency.	☐
	OTHER PRECAUTIONS TAKEN	
☐		

EXHIBIT V-5

WARNING!

HOT WORK IN PROGRESS
WATCH FOR FIRE!

IN CASE OF AN EMERGENCY:

CALL: O'Hare Command Center

AT: 773 - 894 - 9111

Sample

WARNING!

WARNING!

HOT WORK IN PROGRESS
WATCH FOR FIRE!

IN CASE OF AN EMERGENCY:

CALL: MIDWAY COMMAND CENTER

AT: 773 - 838 - 9111

Sample

WARNING!

EXHIBIT V-6

Confined Space Entry Permit

Entry Date: _____ Start Time: _____ Completion Time: _____

Description of Work To Be Performed: _____

Description of Space

Confined Space ID Number: _____ Type: _____

Classification: _____

Building Name:

Location of Confined Space:

Entry Checklist

	Yes	No
Potential Hazards Identified?	☐	☐
Communication Established with Operations Ctr.?	☐	☐
Emergency Procedures Reviewed ?	☐	☐
Entrants and Attendants Trained?	☐	☐
Isolation of Energy Completed?	☐	☐
Area Secured?	☐	☐
Emergency Escape Retrieval Equipment Available?	☐	☐
Personal Protective Equipment Used?	☐	☐

Confined Space Equipment and PPE Used During Entry:

- ☐ Tripod with Mechanical Winch
- ☐ Rescue Tripod with Lifeline
- ☐ Harness
- ☐ Two-way Communications
- ☐ General / Local Exhaust Ventilation
- ☐ Gloves
- ☐ Chemical Resistant Clothing
- ☐ Hearing Protection
- ☐ Air Purifying
- ☐ Self Contained Breathing Apparatus
- ☐ Steel Toe Boots
- ☐ Hard Hats
- ☐ Safety Glasses / Goggles / Face Shield
- ☐ Other PPE or Equipment Used:

Air Monitoring Results Prior to Entry

Monitor Type: _____

Oxygen ____ % LEL ____ % CO ____ % H2S ____ %

Calibration Performed?	☐	☐
Alarm Conditions?	☐	☐

Monitoring Performed by (sign): _____ Date: _____ Time: _____

Continuous Air Monitoring Results

Time		Oxygen	%	LEL	%	CO	%	H2S	%
Time		Oxygen	%	LEL	%	CO	%	H2S	%
Time		Oxygen	%	LEL	%	CO	%	H2S	%
Time		Oxygen	%	LEL	%	CO	%	H2S	%

Authorization

We have reviewed the work authorized by this permit and the information contained here-in. Written instructions and safety procedures have been received and are understood. Entry cannot be approved if any squares are marked in the "NO" column. This permit is not valid unless all appropriate items are completed. This permit is to be kept at the jod site. Return site copy to supervisor.

Entrants Name: _____ Signature: _____ Date: _____

Attendants Name: _____ Signature: _____ Date: _____

Supervisors Name: _____ Signature: _____ Date: _____

Sample

EXHIBIT V-6

CONFINED SPACE PERMIT

This permit is to be completed prior to entry into confined space.
A separate permit needs to be completed each day and shift that work is done.

Date: _____

Specific location and space: _____

Confined Space Supervisor: _____

Confined Space Attendant: _____

ATMOSPHERIC READINGS

Time of Readings →								
(02) Oxygen Between 19.5% & 23.5%								
(COMB) Combustible Gases Less than 10%								
(CO) Carbon Monoxide Less than 35 ppm								
(H2S) Hydrogen Sulfide Less than 10 ppm								
Attendant Initials								

* Readings recorded above must be within the prescribed safe limits.

ENTRANT LOG

Entrant (Print Name)	Time In	Time Out	Time In	Time Out	Time In	Time Out	Time In	Time Out

SAMPLE

O'HARE COMMAND CENTER (OCC) EMERGENCY: 773.894.9111
O'HARE COMMAND CENTER (OCC) NON-EMERGENCY: 773.894.5000
ORD Airside Operations: 773.686.2255
ORD H & R Monitor Room 773.686.2248

CONFINED SPACE PERMIT

This permit is to be completed prior to entry into confined space.
A separate permit needs to be completed each day and shift that work is done.

Date: _____

Specific location and space: _____

Confined Space Supervisor: _____

Confined Space Attendant: _____

ATMOSPHERIC READINGS

Time of Readings →								
(02) Oxygen Between 19.5% & 23.5%								
(COMB) Combustible Gases Less than 10%								
(CO) Carbon Monoxide Less than 35 ppm								
(H2S) Hydrogen Sulfide Less than 10 ppm								
Attendant Initials								

* Readings recorded above must be within the prescribed safe limits.

ENTRANT LOG

Entrant (Print Name)	Time In	Time Out	Time In	Time Out	Time In	Time Out	Time In	Time Out

SAMPLE

MIDWAY COMMAND CENTER (MCC) EMERGENCY: 773.838.9111
Midway Airside Operations: 773.838.0677

CONFINED SPACE CHECKLIST

EXHIBIT V-6

Attached this form to the Confined Space Permit. A new form must be completed at the beginning of each shift.

Date: _____

Phone #: _____

Form completed by: _____

Signed: _____

NOTIFICATION

OCC duty supervisor notified? - Name:	Yes: ____	No: ____	N/A:____	On site radio / telephone check with OCC?	Yes: ____	No: ____	N/A:____
Monitoring office notified of work to be completed at H & R?	Yes: ____	No: ____	N/A:____	On site radio telephone check monitoring office?	Yes: ____	No: ____	N/A:____
Predetermined emergency response location arranged with OCC if in remote area?	Yes: ____	No: ____	N/A____	Has each entrant received confined space training?	Yes: ____	No: ____	N/A:____
Confined space supervisor determined?	Yes: ____	No: ____	N/A:____	Confined space supervisor determined?	Yes: ____	No: ____	N/A:____
Confined space attendant determined?	Yes: ____	No: ____	N/A:____	Emergency location form completed?	Yes: ____	No: ____	N/A:____
Confined space entrant(s) determined?	Yes: ____	No: ____	N/A:____	Personnel who will meet rescue team determined?	Yes: ____	No: ____	N/A:____

PREPARATION

Personnel informed of potential hazards and safety talk conducted prior to beginning of work?	Yes: ____	No: ____	N/A:____	Attendant understands potential exposures signs & symptoms?	Yes: ____	No: ____	N/A:____
Entry and emergency procedures reviewed?	Yes: ____	No: ____	N/A:____	First aid equipment available?	Yes: ____	No: ____	N/A:____
MSDS / NIOSH chemical hazard sheet(s) reviewed?	Yes: ____	No: ____	N/A:____	Lockout / Tag out needed prior to work?	Yes: ____	No: ____	N/A:____
Lane closures and buffer zones are needed.	Yes: ____	No: ____	N/A:____	Permit is on site and being completed by attendant?	Yes: ____	No: ____	N/A:____
Confined space meter daily calibration checked?	Yes: ____	No: ____	N/A:____	Atmospheric monitoring conducted?	Yes: ____	No: ____	N/A:____

EQUIPMENT REQUIRED

Forced air of exhaust ventilation?	Yes: ____	No: ____	N/A:____	Specialized tools used?	Yes: ____	No: ____	N/A:____
Ground fault circuit interrupters (GFCI)?	Yes: ____	No: ____	N/A:____	Supplemental lighting used?	Yes: ____	No: ____	N/A:____
Retrieval equipment?	Yes: ____	No: ____	N/A:____	Equipment rated for explosive atmospheres?	Yes: ____	No: ____	N/A:____
Fire extinguishers?	Yes: ____	No: ____	N/A:____	Communication equipment?	Yes: ____	No: ____	N/A:____

PERSONAL PROTECTIVE EQUIPMENT REQUIRED EQUIPMENT REQUIRED

Hard hat?	Yes: ____	No: ____	N/A:____	Protective clothing?	Yes: ____	No: ____	N/A:____
Eye / Face protection	Yes: ____	No: ____	N/A:____	Hearing protection?	Yes: ____	No: ____	N/A:____
Gloves - Type:	Yes: ____	No: ____	N/A:____	Retrieval harness / tripod?	Yes: ____	No: ____	N/A:____
Safety boots?	Yes: ____	No: ____	N/A:____	Respirator type:	Yes: ____	No: ____	N/A:____

IN CASE OF AN EMERGENCY

DIAL

O'Hare Command Center
At:

Sample

773.894.9111

Sample

This operation is located at:

Make sure to describe incident:
What is involved, fire, injury, utilities.
Describe injuries and identify if injured party is in a confined space or trench.
Do Not Hang Up Until Informed by Emergency Dispatcher

EXHIBIT V-6

IN CASE OF AN EMERGENCY

DIAL

Midway Command Center
At:

Sample

773.838.9111

Sample

This operation is located at:

Make sure to describe incident:
What is involved, fire, injury, utilities.
Describe injuries and identify if injured party is in a confined space or trench.
Do Not Hang Up Until Informed by Emergency Dispatcher

EXHIBIT V-6

Emergency "You Are Here"

Sample

773.894.9111

Sample

Staging Area/Terminal Location: _____

Be sure to send someone to the Staging Area/Terminal Location to meet the emergency response team.

Grid Location: _____

- **Make sure to describe incident.**
- **What is involved e.g. fire, injury, utilities.**
- **Describe injuries and identify if injured party is in a confined space or trench.**

EXHIBIT V-6

Form # 3

EXHIBIT V-7

CHICAGO CDA DEPARTMENT OF AVIATION

Rosemarie S. Andolino
Commissioner

DEPARTMENT OF AVIATION

ORD Notice to Airport Users - Log No. ____

CDA Project No. (*or, Requestor*) Date

Project Title & Location

Contractor Phone

Originator of User Form 24 Hr. Phone

Print Name/Signature

Has a Pre-Construction Meeting been held? ☐ Yes ☐ No

Have all permits been procured? ☐ Yes ☐ No **Must submit copies to CDA.**

Is work being done by ORD badged personnel? ☐ Yes ☐ No If not, who is escorting? ____

Effective Dates Start: ____ Completion: ____

Hours Affected From: ____ Hrs. To: ____ Hrs. or ____ Hrs/Day

Description of Change/Disruption/Termination (include sketch for clarification)

Affected Users (signatures required) Signatures: Building Engineer ____

Airline/Tenant Rep. ____

☐ **Electrical Work: Electrical permits are required** and as-builts must be submitted to CDA for Single Line Diagrams

☐ **System Shutdown :** E-Mail all affected parties with schedule of power or water shutdowns, i.e. CDA, tenants...)

☐ **Hot Work Permit:** Inform Crash & Fire Rescue, attach copy, and post original at jobsite

☐ **Underground Work:** Have the following parties been contacted?

DIGGER (utilities) ☐ Yes ☐ No Provide DIGGER Case No. ____

FAA ☐ Yes ☐ No FAA Case No. (7460 Form) ____

ASIG (Fuel Commission) ☐ Yes ☐ No

Department of Aviation		Reviewed	Rejected	Signature	Comments
Landside Operations	894-2085				
Airside Operations	686-2255				
General Supt. Of Utility Systems	686-2320				
Facilities Maint. & Construction	686-7271				
O'Hare Communication Center	686-5000				
CDA Construction Safety	686-2397				
CDA Security Office	686-2397				
C.O.E. - H&R	686-7310				
CDA Foreman of Related Work	686-2248				
CDA Telecommunications	686-2310				
CDA Design & Constr. Engineer	894-5497				

Project or Construction Managers must review and verify all affected parties are notified and sign below.

____ 24 Hr. Phone ____

Resident Engineer or Construction Manager

____ 24 Hr. Phone ____

Project Manager (CDA or Consultant)

*****POST SIGNED ORIGINAL FORM AT JOBSITE*****

version 02/2011

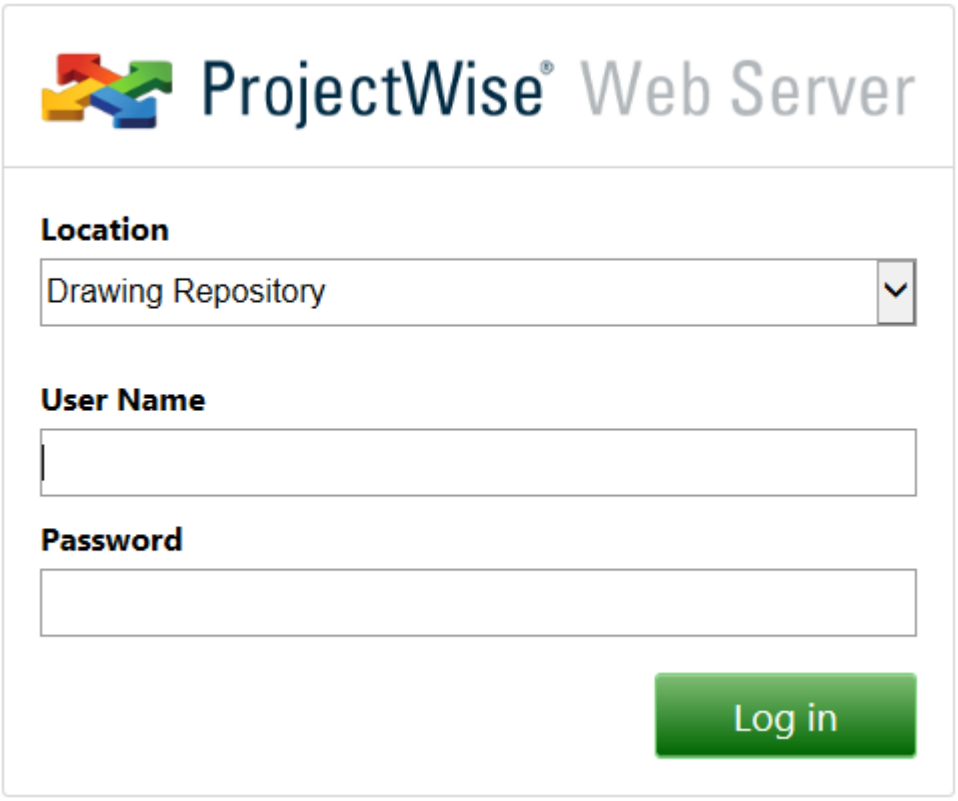
Exhibit 9: Project Wise Access Instructions

In order to simplify access to as-built drawings, the CDA has opened Web access to Drawing Repository (pw.ohare.com). The intention of the Drawing Repository is to store all the Standards and Project Drawings for the Chicago Department of Aviation. Users will need to add pw.ohare.com to a trusted site under Internet Explorer and use Internet Explorer versions 10 or earlier.

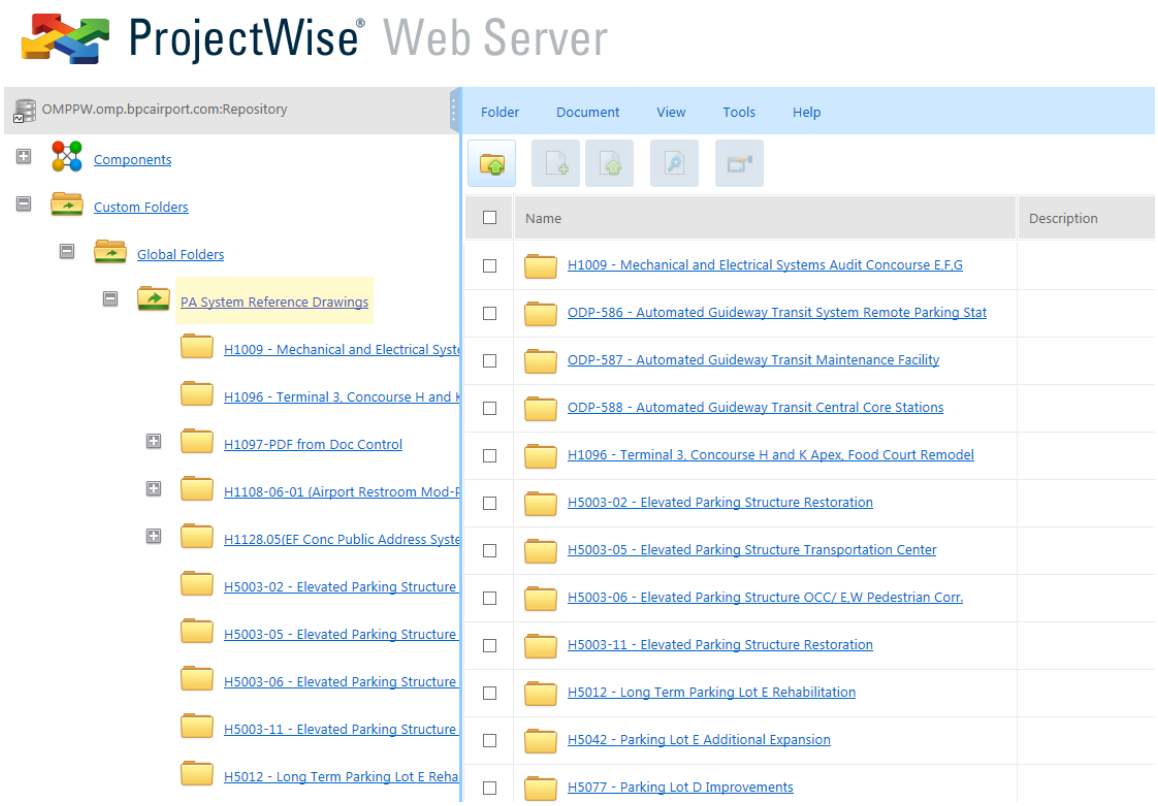
Each user will be given one login to the repository with read only access.

To login from the web version, users will need to select the Drawing Repository (restricted), as shown below, and complete the appropriate username and password. The following are the credentials for the O'Hare PA System Upgrade:

Username: 124497
Password: SAPdr0



To download files with the Web Version, right click the desired file and use the download function. Multiple files can be downloaded by using the shift and ctrl keys in the same manner as Windows Explorer.


ProjectWise® Web Server
OMPPW.omp.bpcairport.com:Repository
Components
Custom Folders
Global Folders
PA System Reference Drawings
H1009 - Mechanical and Electrical Syste
H1096 - Terminal 3, Concourse H and K
H1097-PDF from Doc Control
H1108-06-01 (Airport Restroom Mod-F
H1128.05(EF Conc Public Address Syste
H5003-02 - Elevated Parking Structure
H5003-05 - Elevated Parking Structure
H5003-06 - Elevated Parking Structure
H5003-11 - Elevated Parking Structure
H5012 - Long Term Parking Lot E Reha
Folder
Document
View
Tools
Help
Name
Description
H1009 - Mechanical and Electrical Systems Audit Concourse E,F,G
ODP-586 - Automated Guideway Transit System Remote Parking Stat
ODP-587 - Automated Guideway Transit Maintenance Facility
ODP-588 - Automated Guideway Transit Central Core Stations
H1096 - Terminal 3, Concourse H and K Apex, Food Court Remodel
H5003-02 - Elevated Parking Structure Restoration
H5003-05 - Elevated Parking Structure Transportation Center
H5003-06 - Elevated Parking Structure OCC/ E,W Pedestrian Corr.
H5003-11 - Elevated Parking Structure Restoration
H5012 - Long Term Parking Lot E Rehabilitation
H5042 - Parking Lot E Additional Expansion
H5077 - Parking Lot D Improvements